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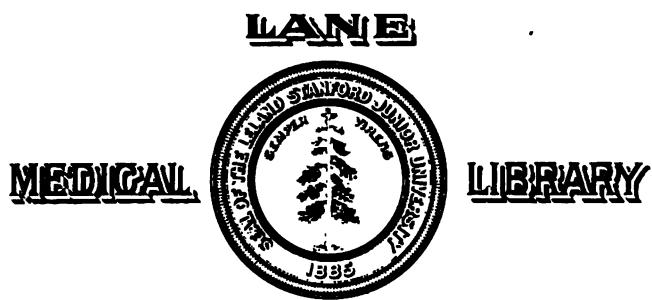
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## THE VOICE

HOW TO TRAIN IT—HOW TO CARE FOR IT

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# THE VOICE

HOW TO TRAIN IT—HOW TO CARE FOR IT

FOR MINISTERS, LECTURERS, READERS, ACTORS,  
SINGERS, TEACHERS, AND PUBLIC SPEAKERS

BY

E. B. WARMAN A.M.

AUTHOR OF PRINCIPLES OF PRONUNCIATION IN WORCESTER'S DICTIONARY; HOW TO READ,  
RECITE, AND IMPERSONATE; PHYSICAL TRAINING, OR THE CARE OF THE BODY;  
PRACTICAL ORTHOEPY AND CRITIQUE; CRITICAL ANALYSIS OF  
"POE'S RAVEN"

*With Illustrations*

BY MARIAN MORGAN REYNOLDS

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## P R E F A C E.

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IT is our endeavor to set forth such teachings as will strengthen weak lungs; inculcate ideas of correct breathing and management of the breath; remove and prevent throat, lung, and bronchial trouble; also remove and prevent swollen tonsils and elongated uvula, without resorting to the surgeon's knife; strengthen the pillars of the soft palate, thereby removing what is known as "dropping of the palate;" strengthen and invigorate the vocal organs, that they may be used daily, for consecutive hours, without incurring the slightest injury, or causing weariness or hoarseness; and enable one to manage the breath in the production of tone, thus giving the maximum of power with the minimum of strength.

These pages are intended to be of practical benefit to ministers, lecturers, actors, readers, singers, teachers; in fact, to all who use the voice, whether publicly or otherwise.

Every man should be worthy of his calling; and no less important is it that he should prepare for the proper performance of its duties.

This volume deals only with the control of the voice, while its companions, "Gestures and Attitudes," and "Principles of Reading," serve as guides to the other requisites of the public speaker; namely, control of the body, and control of the thought. That each, in its turn, may serve its purpose, is the desire of

THE AUTHOR.

CHICAGO, ILL., 1889.

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*“Oh, how our organ can speak with its many and wonderful voices,—  
Play on the soft lute of love, blow the loud trumpet of war,  
Sing with the high sesquialter, or, drawing its full diapason,  
Shake all the air with the grand storm of its pedals and stops !”*

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**Part First.**

**THE USE AND THE ABUSE OF THE  
VOCAL ORGANS.**





FIG. 1.

Fig. 1 represents some of the important structures and organs that are in close relation with the diaphragm, or that co-operate with it in producing song and speech. The heavy curved line drawn across the lower part of the chest represents the position of the upper curvature of the diaphragm. Below it are shown the lobes of the liver, the stomach, and part of the intestines. Above the diaphragm, a little to the left of the median line, the heart is represented. The lungs are seen filling the chest and communicating with the trachea, which in turn leads into the larynx, or vocal box, and then the air-tract leads on through the pharynx, mouth, and nasal cavities, the last three being the principal resounding cavities for the voice. The whole, with the diaphragm as the foundational flooring, the ribs as the framework, and the accessory muscles, which are not shown, forms the vocal and speech mechanism.



# THE VOICE.

---

## THE USE AND ABUSE OF THE VOCAL ORGANS.

"Speech is the temple in which the soul is enshrined."

THERE is a certain mechanical dexterity to be acquired before the beautiful conceptions we possess can be communicated to others. This mechanism is an essential part of all the fine arts.

The golden key to every excellence is practice; and this can be purchased only by labor—unremitting labor—and perseverance. It is absolutely necessary to be acquainted with the power, variety, and extent of the instrument through which we convey thoughts to others.

"God's greatest gift to man is speech, and it is too solemn a thing to treat lightly. It grows out from life, out of its agonies and ecstasies, its wants and its weariness."

It is said, "By their fruits ye shall know them," and it may also truly be said, By the *voice* ye shall know them. Not only is this true in the every-day walks of life, but it

is especially true in the higher walks,—among those who appear before us in the pulpit, on the rostrum, and on the stage.

By the *eye* of an audience are we first measured; then the *ear* passes judgment. It is true, attitude and bearing have much to do with the effective rendering of any vocal production, and no one can be said to be a thorough artist who has not become acquainted with the principles of dramatic expression.

“ Cleanliness is next to godliness;” and this is as essential concerning the tone of voice as it is in regard to the body. In this enlightened day we would as soon think of tolerating a speaker with a sluggish, slovenly tone, as we would were he to appear before us with his clothing disordered and his hair unkempt; the one is as repulsive to the ear as is the other to the eye.

The functions of the human voice are many. The public man, whether preacher, lecturer, reader, actor, doctor, lawyer, or whosoever or wheresoever he may be, should understand the wonderful power of the human voice.

#### THE DOCTOR.

The doctor needs it? Certainly. When he enters the sick-room, his face all radiant, his great manly heart sympathetic, his voice (as a natural consequence) full of sweet-

ness and purity, he does more to alleviate the suffering of his patient than can all the drugs that he may leave. But, on the other hand, when a doctor enters the room with clouded brow, himself a victim of dyspepsia and a bad liver (because *he* is a bad liver), looking on the dark side of everything, his heart all warped, and his voice (also as a natural consequence) snapping, snarling, growling, he too does more for his patient than all the drugs of the universe can counteract. Some may consider that this has nothing to do with the voice, but it is wholly due to the manner of the man. That's the point. This cultured voice is sure to be reflex in its action; for culture permeates the whole man.

Some persons enter a room like a gleam of sunshine, others like a thunder-cloud; so some voices attract, others repel.

#### THE MINISTER.

The minister too frequently says, "If I possess the Holy Ghost, I need pay no attention to the cultivation of the voice."

We will not stop to speak of the many requirements of him who occupies so responsible a position, but will consider briefly that of the voice. The Bible-reading, hymn-reading, the delivery of the sermon, and even the prayer has its

influence on the hearer in just that degree in which he is impressed by the vocal utterances. The Bible stories are familiar to almost all in the congregation, but they become the more intensely interesting as the speaker makes them so. Many a good sermon, intellectually speaking, has been wholly marred by a poor delivery.

As we say in our lecture on "Bible-reading and Pulpit Eloquence," every word possesses three forms of life; that is, its eye-life, its ear-life, and its soul-life. The eye-life is its orthography, the ear-life is its orthoepy, but the soul-life is its significance or expression. The words of the minister must be so voiced as to convey the latter fully and forcibly; that is, they must be soul-felt.

The voice is a God-given gift. It is a power which God has given to be used to His glory; and the minister can no more neglect its use and cultivation than he can properly neglect any other gift from His hand. The human voice has been made to reach the heart, and to stir it up by its thrilling vibrations. We might as well despise the ear for its office of carrying the sound, as to undervalue the manner in which those sounds are made. It is true "the clergy bear the messages of God in earthen vessels, but that is no reason why they should *display* their mere earthiness." While volumes might be written on the duties of the minister in his public office, we have only hinted at the

necessity of voice cultivation, trusting that in this case, as in many others, "a word to the wise is sufficient." As a concluding thought to the minister, let it be borne in mind that the truths of the gospel, above all others, should be correctly voiced; remembering ever that truth, *even truth*, when repulsively arrayed, will repel rather than attract the hungry soul.

#### THE LAWYER.

The lawyer says, "If the judge and jury hear me and know what I am talking about, that is all I need to understand of the voice."

How little he is impressed with the fact that the voice is the vehicle for the conveyance of his thought, and that it is not so much *what* is said as *how* it is said.

Many a juror has considered a man's argument weak, because his voice and manner were against him; while, on the other hand, a lawyer, understanding the power of the human voice, has completely won the hearts of the jurors by appealing to their sympathies.

There are scores of instances where lawyers, having aspired to political renown, and having entered the campaign as out-of-door speakers, have become physical wrecks in consequence of an improper use of the voice.

## THE ACTOR.

The actor also raises his objection, not only in regard to the voice, but to the preparation for many qualifications for the stage. You can always hear the stereotyped reply: "Just throw yourself right on the stage, and you will take to acting as a duck takes to water." The duck is in its natural element in the water, but there are very few men and women, comparatively speaking, in their natural element on the stage. The stage is to-day groaning under the heavy burden of actors, or would-be actors, who have been "thrown" upon it. It is true it is the best place to learn stage-business, but what knowledge can there be gained of the great medium of thought and feeling,—the human voice? There is no doubt that the actor has an abundance of practice, but of what use is it if it is not *correct* practice?

## THE SINGER.

A singer may understand all the technicalities of music, and yet know little or nothing of the vocal organism.

There is no excuse for throatiness, hoarseness, weariness, nasality, swollen tonsils, elongated uvula, unruly tongue, excessive saliva, dryness of the throat, and the thousand and one ills to which a *singer's* flesh is heir.

It may not be necessary for an organist to be able to name and place every part of the instrument upon which he performs; neither will such knowledge give him the requisite skill to play upon the instrument. Of the mechanism of the *vocal* organs, however, a singer should have a thorough knowledge, though he need not be familiar with the technical terms. There should be a thorough knowledge of pitch, quality, and force. The voice should be under perfect control throughout the entire range. As with the reader, this control will be the result of mechanical work; and then, when the mechanism shall have been put aside, there will be no false notes, no feeling for a tone, no doubt in the mind of the singer, but a perfect and harmonious result.

## THE LECTURER.

It is an indisputable fact that it is not *what* we say, but *how* we say it, that is effective. Many a worthy lecture falls short of its mission because the lecturer has spent his entire force upon the *matter* presented, and neglected the *manner* of its presentation.

We should never lose sight of the fact that whatever *attracts* detrimentally to the *speaker* will *detract* in the same ratio from that which is *spoken*; hence the lecturer

should fully understand the little instrument upon which he plays.

Delsarte teaches us that "the whole secret of captivating an audience by the charms of the voice consists of a practical knowledge of the laws of sound, inflection, respiration, and silence." He further states that "the orator who is ignorant of the laws of sound and inflection resembles the debutant who places the trumpet to his lips for the first time. We know the ear-torturing tones he evolves."

The lecturer should so familiarize himself with the vocal organism that there should not be the slightest effort to produce any vocal or other effect that he may desire.

#### THE READER.

No public reader needs to be informed of the value of a thorough acquaintance with the vocal organs. He should have perfect control of the voice in its entire range. While the eye may resign itself to behold a bad gesture, the ear does not forgive a false note or a false inflection.

Delsarte makes the statement that "the ear is the most delicate, the most exacting of all our senses. The eye is far more tolerant. It is through the voice we please an

audience. If we have the ear of an auditor, we easily win his mind and heart. The voice is a mysterious hand which touches, envelops, and caresses the heart."

The reader should have his voice under such control in private practice that he will have no need to control it publicly. It should then respond to every impulse of thought and feeling. He should be no more conscious of the *tone* he is producing than of his *gestures* and *attitudes*; that is, *he* should not make any of them, they should make *themselves*. Such results, however, are not accomplished without previous study; but the study — only as it becomes a part of the reader — will not be made manifest by any mechanism.

The reader should be able to surrender his body and voice to his subject; then, when he *thinks* the character, he will *be* the character, and the voice will always be in harmony therewith.

#### THE TEACHER.

A teacher's voice is liable to become monotonous, owing to the nature of her work. When a teacher's heart is in her daily duties it is at once discernible in its effect upon the vocal organism, for "the heart giveth grace unto every art."

The teacher who lives upon a mental plane exclusively, will possess a quality of voice not the most desirable,—a cold or mental quality. Such a one should cultivate the moral quality of voice; that is, the heart or emotional element,—a tone too often foreign to the school-room.

In avoiding the mental tone, care should be taken to prevent the other extreme,—that is, the vital tone,—as it possesses the antagonizing element. Seek, therefore, that happy medium whereby pupils are persuaded, though they scarcely know how or why, being unable to solve the mysteries of that psychological influence that surrounds and possesses them.

#### HEALTHFULNESS.

Not the least to be considered in this study of the voice is the matter of health. This applies not only to those whom we have mentioned as *especially* needing it, but to *all* who use the voice. It is an acknowledged fact, and one in which our leading physicians concur, that ignorance of the right use of the lungs and larynx causes more cases of bronchitis and pulmonary consumption among students, teachers, vocalists, clergymen, and other public speakers, than all other causes combined. The difficulty arises, not in using the voice too much, but in not using it correctly. Under a *skilful* teacher there is no danger of the most

delicate and sensitive throat being injured, but, on the contrary, all of the vocal organs will be strengthened, and weak lungs will become strong and healthful in their action. Let it be borne in mind that we emphasize the word "skilful."

Many voices are seriously injured, many ruined, through the ignorance of persons undertaking to teach vocal training, while they themselves know little or nothing of the mechanism of the voice or of its capabilities.

It will always be found that "a little showing is worth volumes of written work;" but there are thousands that can be reached by the pen, who cannot avail themselves of the advantages to be gained by coming in contact with the teacher.

#### NOSTRUMS.

Nostrums for the voice should be avoided, or at least discriminately used. They may at first appear to improve the voice, but they will ultimately and permanently injure it. Troches, cough-drops, and expectorants of all kinds should be very sparingly used, as by their too frequent use the tone of the mucous membrane becomes perverted, and serious results follow.

Keep the throat, especially the pharyngeal cavity, as

clear and as clean as possible, as its lining requires the same care in the matter of cleanliness as does the lining of a flute.

Gargle the throat, night and morning, with salt and water, and you will want no nostrums of any kind, but will be able to baffle any throat disease. It is not always convenient to get fresh water just before retiring and early in the morning; hence we would suggest that a pint or quart bottle of the mixture be kept on hand. How strong? To your liking. We would also advise you to hum some tune, with a good strong voice, while you are gargling; and you will thus give the vocal organs an excellent exercise. Take the voice through its entire compass while the water is in the mouth,— now high, now low; now soft, now loud.

Avoid tight collars and tight neckties, as they induce headache, and fulness of blood in the head, vertigo, dizziness, apoplexy, and, sometimes, paralysis.

If the throat is very dry, pure hoarhound candy dissolved in the mouth will be found not only mild in its action but efficacious.

If you have far to walk to the church or lecture-room or theatre, a hoarhound drop, placed in the mouth and allowed to dissolve slowly, will prevent dryness or irritation, as it coats the mucous membrane of the pharynx,

and protects it from the cold or dust, as the case may be.

By all means, avoid coughing. The use of the hoarhound candy, by allaying the inflammation and coating the mucous membrane, may be sufficient. If not, seek the aid of a physician, for there is nothing more irritating to a cough than to cough.

Constant coughing is precisely like scratching a wound ; so long as it is done the wound will not heal.

When tempted to cough, draw a long breath and hold it until it warms and soothes every cell, and much benefit will soon result from the process.

The nitrogen which is thus retained acts as an anodyne to the irritated mucous membrane, allaying the desire to cough, and giving the throat and lungs a chance to heal.

In case of hoarseness, resulting from cold, manifesting itself a short time before speaking or singing, a little crumb of muriate of ammonia placed in the mouth will give instant relief. Five cents' worth of this (block form) should last a public speaker for years, if not for a lifetime. It is not intended that he should make a meal of it. Like many other things, an overdose is not good for the stomach. It is an excellent thing when properly taken ; but it should be used in the *manner* designated, — that is,

only an occasional nibble. We can have too much even of a good thing. The very best thing to use, not only in case of colds, but to prevent them, is care, mixed with judgment, and taken *ad libitum*.

#### VENTILATION.

Ventilation is of special importance, not only as it affects the speaker's health, but as regards the subject now under consideration,—the voice. It is a well-known fact that sound is audible in a greater or less degree, according to the density or resistance of the aerial fluid. When that fluid is thin, the sound of the voice is diminished; whereas, if that fluid be wholly removed, as in an empty receiver, no sound whatever will result.

This explains one of the causes why the voice is more easily heard in a room when it is empty than when it is full; another cause is that the clothing of the audience (as in the case of carpets and upholstered goods) has a tendency to deaden the sound.

Churches and all public halls should be thoroughly ventilated, not only *previous* to their use, but *during* their use; the internal heat rarefies the air, thereby forming an obstruction to the voice. We speak of a room "crowded almost to suffocation." This is due not wholly to the

number of people, but also to the amount of oxygen consumed in other ways. It has been proved that every burning gas-jet consumes as much oxygen as sixteen persons. Surely it behooves us to look well to the ventilation, not only for the care of the voice, but also as regards the health.

#### MODULATION OF THE VOICE.

The modulation of the voice is an essential element to be considered. Every one has a certain pitch of voice in which he is most easy to himself and most agreeable to others. It is only in a certain pitch that the voice can command the greatest variety of tones, so as to utter them with energy and ease. This may be called the natural pitch. This is the pitch in which we converse, and this must be the basis of every improvement we acquire from art or exercise; for such is the force of exercise upon the organs of speech, as well as upon every other organ of the human body, that constant practice will strengthen the voice in any key in which we use it, though this happen not to be the most natural and easy at first. This is abundantly proved by the strong vociferations which the itinerants in the street acquire after a few years' practice. Whatever key they happen to pitch upon at first is gen-

eral, preserved; and the voice in that note becomes wonderfully strong and sonorous.

As constant exercise is of such importance to strengthen the voice, care should be taken that we exercise it in that tone in which it has naturally the greatest power and variety. This is the middle tone,—the tone we habitually make use of when we converse with, or speak to, persons at a moderate distance.

The situation of the public speaker is a situation of art; he not only wishes to be heard, but to be heard with energy and ease. For this purpose his voice must be powerful in that key which is easiest to him,—in that into which he will most naturally fall, and which he will certainly have the most frequent occasion to use; and this is the middle tone.

It is absolutely necessary to obviate a very common mistake with respect to the voice, which may lead to an incurable error; that is, the confounding of high and low with loud and soft.

#### SUSTAINING TONES.

Because we to-day are called upon to speak to a thousand where yesterday we addressed a few hundred, it is not necessary that the pitch be raised, in order to reach

the multitude. Experience is the best teacher. The ~~man~~ has had occasion to use his voice, out of doors, day after day to assemblages of five thousand and more, frequently with the wind "dead ahead," or blowing across his path, and he has never failed in being heard by those standing the most remote from him. This did not require any extra effort, and consequently did not result in hoarseness or weariness, but invigorated the entire system of the vocal organs to such a degree that the beneficial results were actually astonishing, and when evening came the voice was full, resonant, clear, and under perfect control.

An old gentleman, being present every year for four years in succession at these out-door meetings, came upon the platform one afternoon and said: "I have listened to out-door speaking since I was a boy, but I never knew words to carry such a distance with so little apparent effort. I stand near you, and I think you cannot be heard more than a hundred feet away. I go to that point, and then double and treble the distance, and more; even then I catch every syllable,— not only the vowels, but also the final consonants. So I have concluded there must be a secret about it; and as I am a man of more than three-score and ten, you will not hesitate to divulge it to me?"

We assured him of our willingness to impart the knowledge, but endeavored to impress him with the thought

that *knowing* and *doing* were two distinct features, and that the doing was made perfect by sufficient and careful practice.

Yes, there is a secret; that is, there are essential points that lie hidden from the general speaker. This so-called secret is threefold: First, the voice must be located or focused against the hard palate, and kept there through the entire clause; second, the tone must be sustained by the correct use of the diaphragm muscles, thereby managing the diaphragm (as by no other means can we manage the breath); third, the words must not be cut or clipped, but well filled, and every element must have its due quantity and quality.

This is the sum and substance of our reply; but for the consideration of the student we will enter more closely into the details of the work. The vowels are full and open, and will naturally carry quite a distance; but distinctness is wholly due to the consonants, as they form the joint, or articulation, between the vowels. Special care must be given to the final consonants; that is, the voice should be thrown beyond the shut position, without opening the position. Ninety-nine people in a hundred do not send forth their final consonants, but swallow them.

Belonging to the third essential element, concerning the words, the great secret is to magnify the words in propor-

tion to the distance they are to cover, but to remember that the secret is prolongation and continuity of sound, not the raising of the voice and making undue effort.

"Let us suppose," says Delsarte, "a hall with tapestries, a church draped in black.

"Logic says sing or speak more loudly. But this must be guarded against, lest the voice become lost in the draperies.

"The voice should scarce reach these too heavy or too sonorous partitions, but, leaving the lips softly, it should pulsate through the audience, and go no farther.

"An audience is asleep. Logic demands more warmth, more fire. Not at all. Keep silent, and the sleepers will awaken."

A strong plank in the platform of the Delsarte Philosophy of Expression is, "A true artist never shows effort." This is true in every calling, and especially in the use of the voice. The great difficulty to be overcome in outdoor speaking is the tendency to rasp or tear the throat.

Rasping is caused by too much throat effort; that is, too much contraction of the throat for the volume of voice that is sent through it. The throat should be used as a hollow tube through which the voice passes. We must not set the throat, but think the tone we want, and then Nature will do her work in regulating the size of

the tube. There should always be a reserve of power, no matter how much effort is put forth. Look at the eagle when he is poising. It requires greater effort for him to poise than to fly; yet the effort is not visible, and he thus gives to us a fine example of reserve power.

As an illustration of sustaining tones, we have the words "boat-a-hoy." No matter how much force is placed upon them, they would be heard no great distance unless they were prolonged, especially the vowels *o* and *oi*. Even then, as they are generally called, these words would not be recognized at any great distance, were it not that they are so familiar to all.

In addressing large audiences, we would say, speak to those sitting in the last row of seats, in such a manner as not to make it unpleasant for those sitting near. Be more particular in regard to the quality of the voice than to the quantity. Be distinct, but not pedantic. In the most impassioned discourse the same rule holds good, and the orator in his flights of eloquence gets what is termed "a swing to his sentences." The most important part in the execution thereof is what we have termed continuity, not only in the flow of the words, but especially in that of the voice.

Above all, avoid monotony of tone. Choose the middle key, or, as we have said, your best tone for ease and

strength; then play above and below it. Occasionally raise the pitch; but the main caution is to avoid beginning high, and continuing in that key, especially when by so doing a strain is brought to bear on the vocal organs. The following lines have been frequently given as a criterion for public speakers:—

“ Be self-possessed  
When most impressed.  
Begin low,  
Proceed slow;  
Rise higher,  
Take fire.”



**Part Second.**

**THE ANATOMY, HYGIENE, AND PHYSIOLOGY  
OF THE VOCAL ORGANS.**

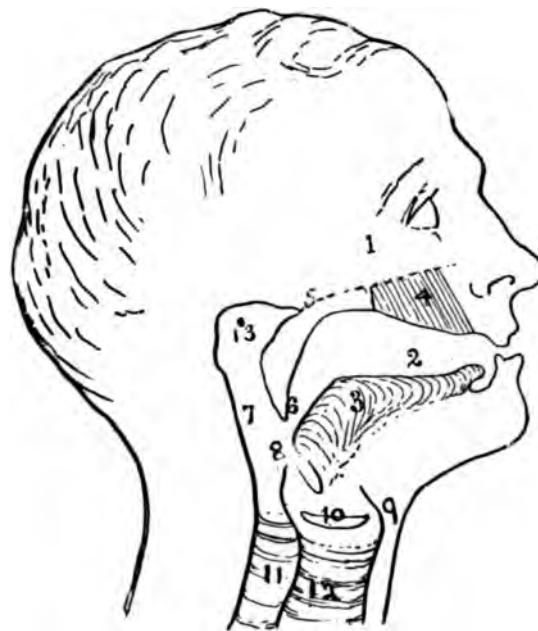


FIG. 2.

1. Nasal Passage.	5. Soft Palate.	9. Larynx.
2. Mouth Passage.	6. Uvula.	10. Vocal Chords.
3. Tongue.	7. Pharynx.	11. Food Passage.
4. Hard Palate.	8. Epiglottis.	12. Air Passage.
13. Eustachian Tube.		

**THE ANATOMY, HYGIENE, AND PHYSIOLOGY OF THE VOCAL ORGANS.**

IN speaking of the anatomy, hygiene, and physiology of these organs as related to the production of voice, technical terms will as much as possible be avoided, and in their stead we will use only such as are familiar to all.

Every part in Nature serves two or more purposes. The nasal cavity serves for an air and voice passage; the mouth cavity, for a food and voice passage, and not for breathing.

The soft palate acts as a valve, whose primary function is to allow breathing during mastication of food; its secondary function is to control the passage of air in the emission of sound.

The vocal chords serve two purposes,—first, they protect the lungs from small particles of food; second, they produce sound.

**THE NASAL PASSAGE.—THE MOUTH PASSAGE.**

The nasal passage is of about the same size as the mouth passage; although many persons, judging entirely from the size of the apertures leading to each, imagine the nasal passage to be much the smaller.

The primary function of the nostrils is breathing, and Nature has so lined the nasal passages with little sieves as to prevent particles of impurity from passing to the throat and lungs. Poisons, when taken from the air through the lips, can be detected only when they are strong enough to be tasted; if taken through the nostrils, Nature provides an alarm in the sense of smell, and the particles thus inhaled are thrown out by sneezing.

After using the voice for any extended effort, the lungs, bronchial tubes, and throat are very warm and sensitive; if cold air reaches them while they are in that condition, serious results, such as congestion, irritation, etc., may follow; hence great care should be taken that the breath passes first through the nostrils, where it will be sufficiently heated to pass to the lungs without injury.

Many persons muffle the *outside* of the throat with the greatest caution, and leave the *inside* wholly unprotected or exposed, by keeping the mouth open and taking the breath through it; and the next day they wonder how it is possible to have such a cold when taking such extraordinary care. The outside of the throat needs no more protection in winter than in summer. The back of the neck is more sensitive to cold than any other part of the body; and should be well protected in cold weather, especially from draughts.

Another source of trouble is the different styles of dressing the throat,—sometimes very high, again very low; sometimes with heavy wraps, then again with light wraps. While it does not need the protection, it resents the removal of it after it has become accustomed to it. Occasionally, especially in singing, it may be necessary to take breath through the lips; but let it be sipped very quietly, not sucked in, as that dries the throat and is otherwise very trying; but by thus sipping it no bad results will be experienced. “The nose is the normal air-route for all ordinary occasions in breathing, and the mouth should be brought into use only during extraordinary occasions.” A cold in the head can be completely broken up by closing the lips and persistently forcing every breath through the nostrils.

The dog is the only animal that naturally breathes through the mouth; and this is done as an auxiliary to perspiration, as Nature has intended the tongue of the dog, with its unnumbered pores, to act in the same capacity as does the skin with us.

The Reds keep the mouth shut, whereas the Whites are much more careless. The teeth require moisture to keep their surfaces in good condition. When the mouth is open the mucous membrane of the throat has a tendency to become dry; the teeth lose their needed supply of moisture,

and thence come discoloration, toothache, decay, looseness, and eventual loss of teeth. The Indian warrior sleeps, hunts, and even smiles, with his mouth shut. Mr. George Catlin, in his history of the North American Indians, says he never met one that breathed through the mouth, nor one that was deaf, unless born so. The habit of breathing naturally through the nose would therefore appear to preserve a healthy state of the air-passage (Eustachian tube) from the back of the throat to the middle ear on each side.

We would like to say to thousands of men, women, and children, *Shut your mouth!* We would send forth this caution, not as an impudent demand, but as good hygienic advice.

Catarrh, which is usually a chronic cold in the head, can be greatly relieved, sometimes cured, always prevented, by breathing at all times through the nostrils. If you take a cold,—though you have no right to take anything that does not belong to you,—it will have its immediate effect upon the voice; and greater caution than ever is then to be observed in the matter of breathing. Under no consideration should you breathe through the mouth. No: no cold, however severe, will completely obstruct the nasal passages if you *will* it shall not; but you must add works to faith. Force the air through the nostrils, and do not allow them to become fully obstructed. Just as soon as you begin to snuffle and find yourself giving expres-

sion to the usual saying, "I believe I'm taking cold," take a brisk walk, and keep the mouth shut, no matter if your breathing is so labored as to be heard half a block away. "Charity begins at home." Better cause others a little discomfort for a few moments by your sonorous breathing, than suffer a life-time with catarrh and its train of consequent miseries.

Oh, you have the catarrh now, and wonder if it is too late! No: never too late to *battle* with disease, though sometimes too late to *conquer*. As this volume is devoted strictly to voice and breathing, we do not consider it out of place to prescribe a remedy for those who are unfortunate enough to suffer from that terrible malady and deadly foe to pure voice production. We will give two recipes, as we have known both to be efficacious:—

First: salt (sea-salt preferred) dissolved in tepid water, and taken through the nostrils.

Second: one ounce of borax dissolved in one quart of rain-water, and taken through the nostrils.

Caution: never *snuff* any liquid through the nostrils, as it is liable to enter the Eustachian tube and result in deafness, thus purchasing release from catarrh at the expense of the hearing. Use a douche, but not at a height to cause too much force. Then, in order to prevent the liquid from entering the tube spoken of, hum a nasal

element (*m* or *n*) while you are using the douche. The humming of the nasal element will close the tube. For the last recipe a Chicago doctor charges the modest sum of \$25. This is cheap enough if it cures, and we have known it to do so. Have the water tepid when used.

*Our* motto is, "Freely ye have received, freely give."

#### THE TONGUE.

The tongue is used principally (vocally speaking) in enunciation and articulation, and, as we well know, is often a very unruly member, but it must be placed under perfect control before being able to produce the best vocal results. At least seventy-five per cent of all defects in speech arise from the incorrect or insufficient use of the point of the tongue; and while the point must be trained for accuracy, the back of the tongue, also, must be under perfect control, so that it may be lowered at will. This can be done only by proper vocal gymnastics, such as will be found under our vocal exercises.

#### THE HARD PALATE.—THE SOFT PALATE.—THE UVULA.

The hard palate is, as its name signifies, hard or inflexible. It ends where the line indicates (Fig. 2), and said ending

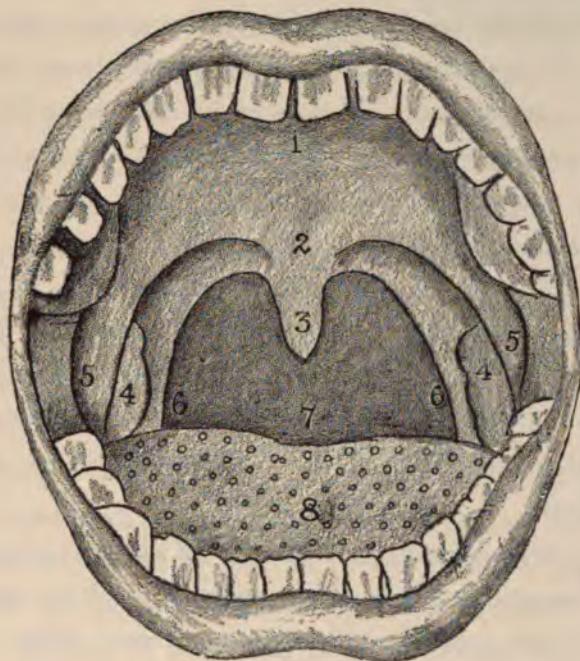


FIG. 3.

1. Hard Palate.	5, 5. Anterior Pillars.
2. Soft Palate.	6, 6. Posterior Pillars.
3. Uvula.	7. Pharyngeal Cavity.
4, 4. Tonsils.	8. Tongue.

can be readily distinguished by the pressure of the finger from the upper teeth, backward, in the roof of the mouth, until it touches the beginning of the soft palate, which is of about the same length as the hard palate, though flexible.

The soft palate (as will be seen by referring to the cut of the same, Fig. 3) is supported by two sets of pillars, known as the anterior and posterior. Dropping between them, and pendent from the centre of the soft palate, is the uvula (No. 6, Fig. 2), represented by No. 3 in the diagram giving a *front* view, such as is seen when looking in the mouth (see Fig. 3). This shows the uvula and pillars in their natural position. The soft palate may be so raised and contracted that the uvula will almost, if not entirely, disappear.

The uvula is often erroneously called the palate, and the elongated uvula is often spoken of as "the dropping of the soft palate." When the posterior pillars are so weak that they cannot do their work, the uvula becomes elongated and swollen, and is always in the way. When the uvula is long enough to lie against the back of the tongue, it causes coughing and hacking, or what is known as "clergyman's sore throat," though this is not always the cause of this disturbance.

Between the anterior and the posterior pillars lie the tonsils,—another source of annoyance to vocalists. These

tonsils sometimes become so enlarged that a free passage of air is impossible. In such cases physicians resort to the knife, and the tonsils are removed and the uvula clipped. When this is properly done temporary relief will follow; but oftener the voice is ruined forever. How much better, by vocal exercises especially adapted to the work, to strengthen the pillars of the soft palate so that they can do their work properly, and thus put them in a healthful condition! The surgeon's knife does not remove the cause, either in the case of the elongated uvula or of the swollen tonsils; and the same cause will produce a like result.

Nothing short of proper vocal treatment will entirely and permanently remove the trouble. Just as any weak member of the body may be strengthened by judicious exercise, so all these may be likewise strengthened.

The position of the posterior pillars of the soft palate also affects the tones of the voice. If one has a high, light voice, the pillars approximate closely; and the distance between the pillars must be widened if the tone is to be lowered and broadened. The pillars must have sufficient vitality to lift the soft palate, so that it will form no obstruction to the tone in singing or reading.

During mastication the soft palate drops down on the tongue so as to shut off the passage of air through the

lips, and thus prevents the particles of food from slipping down the air passage.

By the soft palate, acting as a valve, nasal and pure tones are regulated. What are commonly called nasal tones are, in reality, catarrhal tones; that is, the nostrils are so closed that the nasal elements (*m*, *n*, *ng*) cannot pass through them. A person with a severe cold does not talk *through* his nose, but in reality *without* its use, as, the nasal passages being closed, he substitutes the corresponding consonants, *b* for *m*, *d* for *n*, *g* for *ng*.

Good morning, Mr. Smith (clear tone).

Good bordig, Bister Sbith (catarrhal tone).

Lines to Mary Jane (clear tone).

Lides to Bary Jade (catarrhal tone).

It will be seen that the clear tones *include* the nasal elements, while the catarrhal tones *exclude* them.

Nasality is sending through the nostrils tones or words that do not contain nasal elements. The cause of this defect is the dropping of the soft palate, owing to the weakness of the posterior pillars.

To prove whether nasality exists, the following simple experiment will suffice. Take any sentence in which *m*, *n*, or *ng* does not occur (for example, "I have a desire to test this"); clasp the nostrils with the thumb and fin-



ger (completely closing the nostrils); then, if you can speak the words with perfect clearness, you may rest assured there is no nasality; but if, on the other hand, you find some of the words trying to press their way through the nostrils, thereby causing the tones to be impure, you may be equally confident that nasality exists. The soft palate should have such vocal training as will give the necessary life to its supports; that is, to the posterior and anterior pillars. Where the aid of the teacher cannot be had, it will be found that the following exercise will be of great benefit in the removal of nasality. Practise wholly upon sentences in which the nasal elements (*m*, *n*, and *ng*) do not occur, holding the nostrils, as before stated, and talking the sentence at a distant object—yes, *at* the object—in such a way as to require the opening of the throat.

Care should be taken to increase the force rather than raise the pitch. You will readily recognize the lifting of the soft palate by speaking the vowel *i*; more especially by first speaking *a* and *e*, which do not require so much of the lifting, nor so open a position of the throat, as does the vowel *i*. Look at some object farthest from you in the room; then say *a*, then *e*; then open your mouth well and get ready to say *i*, but do not say it till you have recognized the lifting of the soft palate.

The nasal tone having been spoken of, as to its cause and cure, we will speak briefly of other tones.

The guttural tone is produced by the base of the tongue coming in too close proximity with the back of the pharynx. Our vocal exercises of thinking the gape and giving broad *a* (*awe*) will remove this difficulty.

The metallic tone is caused by the too close proximity of the pillars of the soft palate. To remedy this difficulty take such exercises as we have given for the broadening of the pillars of the soft palate: think a gape and give *awe*; also *oo—awe*, and all exercises of broad *a*.

The orotund tone is one of the most desirable, and requires a full expansion of the pharyngeal cavity. Send the words and tones well forward, but open the throat and allow them to reverberate. The exercises taken to remove guttural and metallic tones will produce the mechanism necessary for orotund tones.

Huskniness is caused by the escape of too much breath. Read what we have said in regard to the management of the breath.

Straining of the voice is caused by too much tension of the vocal chords, and too much force. Many things are benefited by straining, but the voice is not one of them.

There must be the relaxation of the vocal organs, good

position, and management of the breath, of which we have spoken elsewhere.

The voice is originated by vibrations of the vocal chords, and it is affected by the cavities through which it passes. The quality of the voice depends chiefly upon the positions of the organs farther forward than the vocal chords. Our vocal exercises are intended as vocal and breathing gymnastics, which will give perfect control of the vocal organs.

Many speakers are troubled with dryness of the throat and mouth, and resort to liquids to remove the trouble. Again, we must remove the *cause* in order to remove the *effect*. This dryness arises either from nervousness (which causes the ducts of the salivary glands to become closed), or by taking the breath with too much force through the lips. To remove the first, get your self-possession; to remove the second, breathe more through your nostrils, or, as we have said, sip your breath instead of sucking it. With many persons, this nervousness of which we speak produces an excessive amount of saliva in the mouth; in which case observe the first caution,—that is, in regard to self-possession. The throat is too warm even to admit of cold water when using the voice.

## THE PHARYNX.

The pharynx, or pharyngeal cavity, is of the utmost importance in the production of tone, as it is the seat of resonance. Resonance is the reinforcement of sound by cavities. Against the hard palate, just back of the upper gum, is what is known as the "reception-room of the voice." Tones sent to this reception-room must be allowed to go back to the pharyngeal cavity, there be reinforced, and then go forward again, passing through the lips. The more complete the opening of the pharyngeal cavity, the better for the purity of the tone and the volume.

Many suppose it is only necessary, in using the voice, to get the mouth open. This is a grave mistake, as opening the mouth does not necessarily open the throat; and unless the throat is open there can be no resonance, no reverberation. Notice the throat of a bird when it is singing,—how it swells or fills the pharyngeal cavity. This is the indication of an open pharynx. The same thing should take place in the human throat. The outward proof is, not at the lips, but just below the chin, as indicated by the dotted line in the diagram (see page 40). It is not, then, wholly in opening the mouth, as the mouth may be opened so *wide* as to *narrow* the pharynx.

The mucous membrane of the pharynx is exceedingly

sensitive, and is congenial soil to disease; hence another reason for taking the breath through the nostrils. Diphtheria and all contagious diseases of the throat are carried in this way to the pharynx, and lodged on this delicate membrane, soon developing into the worst forms of throat disease. The lining is to the throat what the skin is to the body, and should therefore be kept in a perfectly healthful condition.

We also find that the pharynx is materially affected, temporarily, by articles of diet, such as cheese, cold milk, acids, etc. These thicken and otherwise affect the mucous membrane for the time, and should always be avoided just before using the voice.

Tobacco, also, in any form, has a deleterious effect upon all the vocal organs.

Acids may serve to cut the phlegm, if there is any, but will draw or pucker the mucous membrane of the pharynx; and all acids, by their astringent qualities, must prove, *pro tem.*, detrimental to the voice.

Caution should also be observed in regard to eating a hearty meal just previous to any prolonged use of the voice; for so great is the sympathy between the stomach and the throat, that whatever affects the former is sure to affect the latter. Not only that, but a full stomach is also detrimental as regards management of the breath.

"An overloaded stomach, or one containing indigestible, fermenting food, produces gases which distend the organ, and is an effectual obstacle to the action of the diaphragm. Every singer and speaker knows this fact *practically*, though he may never have thought of the matter *scientifically*.

"The diaphragm cannot fully contract when the stomach is distended. Besides, the attention of the nervous system is taken up with the active process of digestion, and it cannot have so much energy to spare to work properly the vocal and respiratory apparatus. If food must be taken immediately before the diaphragm is to be put to hard work, it should be an easily absorbable and digestible liquid."

#### THE EPIGLOTTIS.

The epiglottis is fastened to the tongue, and is held in place by it as it drops upon the trachea, or air passage. This is the position of the epiglottis when the throat is closed as in swallowing. It has been generally supposed that its only office is to prevent solids and liquids from passing into the trachea, or air passage; but recent experiments have proved that animals experience no difficulty in swallowing after the epiglottis has been entirely cut away.

Its effect upon the voice is the same as that produced

upon the tone of an organ by a valve attached to the organ pipe. When not using the voice, it is erect; but the moment singing is commenced, it constantly changes.

As the larynx is often called the glottis, the lid of the larynx is called the epiglottis; the vocal chords, the lips of the glottis; the opening, the chink of the glottis; the force of the air upon the chords, the stroke of the glottis.

#### THE LARYNX.—THE VOCAL CHORDS.

The larynx is composed of cartilages, and is situated at the top of the trachea, or air-passage (No. 12, Fig. 2), and fastened to it by the cricoid bone, in shape like a horse-shoe, the open part toward the back. The hyoid bone (commonly called Adam's apple) acts as a shield, extending half-way around, and protecting, the larynx.

Inside the larynx are the lips of the glottis, or vocal chords, of which there are two sets; namely, the superior and the inferior, so named from their position: the superior being above and nearest the opening, and directly opposite each other; the inferior beneath, and also opposite each other.

The vocal chords are not merely attached at the ends (as the name might seem to indicate), but are fastened all along the sides.

"Ledges," or "shelves," will perhaps give a clearer idea of the position than the word "chords," and we would suggest the use thereof, inasmuch as terms often mislead. For the same reason it is better to use the names "true" and "false," as applied to the two sets of chords; that is, the superior and inferior. In a healthy state of the chords the superior, or false, ones do not vibrate, and are sup-



FIG. 4.

A View of the Vocal Chords by means of the Laryngoscope.

posed to have nothing to do in producing tone; but it has been recently claimed by laryngoscopists that when the true chords are so diseased as to be useless, the false chords partially perform their work.

Between the true and the false chords are cavities, or ventricles. While the false chords have nothing to do with the production of tone by vibration, they are useful

in the formation of the ventricle, and thus, no doubt, have some special bearing on the voice.

## POSITION OF THE VOCAL CHORDS.



FIG. 5.  
Inhalation and Exhalation.



FIG. 6.  
Vocalizing — Low Tones.

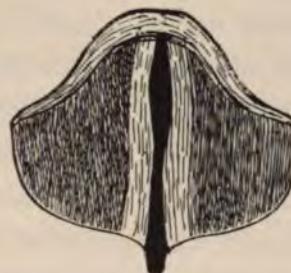


FIG. 7.  
Vocalizing — High Tones.

As the air passes over the chords, they are set in motion; and although there are but two, they may be made to produce an almost incredible number of tones, from

the lowest base to the highest falsetto; sometimes vibrating their entire length and width, at other times only a part of their inner edges.

Thus these two chords, by being variously adjusted (by Nature), give to us the tones produced by the many chords upon the piano and other musical instruments. In a piano we have the long, thick string for the bass, and the short, thin one for the high notes,—a short string always vibrating more rapidly than a long one.

Pitch is determined by the rate of the vibration; quality, by the shape of the vibration; loudness, by the extent or amplitude of the vibration. No one can make a loud tone with the mouth closed, or nearly so. The vocal chords should not be adjusted by thinking of a certain *position* you wish to take, but by thinking of the *tone*, when the chords will adjust themselves, leaving all the muscles flexible and under perfect control.

If you wish to lift some heavy object, do you stop to consider what particular muscles are required for the act? Certainly not. Possibly you could not tell if you wished to. The only question is whether you have sufficient strength in the muscles needed to do the work. If you have, they will respond to the needs, and the work will be accomplished. There is apt to be too much effort in making low tones, trying to push the larynx down by a

movement of the chin. In high tones it raises itself, and no effort seems necessary. If Nature attends to it in high tones, why not in low ones as well?

In all vocalization there must be perfect independence of parts; and until one can lower the larynx for a low note without a desire to help it, or take a high note without feeling obliged to throw the head up, there is but little of the true artist developed. We repeat, that we may the more impress, the Delsartean maxim: "A true artist shows no effort." Vocal exercises should be such as will secure this independence of which we have spoken, and take all thought from the larynx. Nature gives a certain compass, but it requires a master to enable us to get that compass accurately and easily.

Some fail to get their lowest notes, from a habit of contracting the larynx. Take the lowest note you have been in the habit of giving, then think just one lower; make no effort whatever with the larynx, and you will observe that the chords relax; then strike your note, and the result will be a purer tone in consequence of the relaxation of the chords and the less constrained position of the throat. Work from that note and in that manner, being sure there is no more effort made at any time than with the first note. In this way the habit of contraction and the too great tensity of the vocal chords may be over-

come. The relaxation comes, not from any adjustment of the chords, but from thought. While we are thinking the tone, the chords adjust themselves; but, on the other hand, thinking to adjust them for a low note *increases* rather than *decreases* their tension. The chords, or lips of the glottis, are like the lips of the mouth, in the matter of adjustment; there must be activity, yet flexibility. When the breath is simply blown through them, they contract but do not vibrate; but when voice is produced, the contraction is greater, and the vibration is greater or less according to the pitch.

Sometimes there is but a slight vibratory movement, or rattling, of the chords when one is talking. This comes from a lack of vitality, caused either by inflammation or from straining the chords, which is often followed by over-relaxation. If this relaxation, or rattling, is caused by weakness, place some heavy article on the palms of the hands (an Unabridged Dictionary or large Bible), and standing erect, with the forearms at right angles with the upper arms, you will perceive that the effort required to hold the object will give support to the tone, as it increases the tension of the vocal chords, gives an active chest, strengthens the muscles of the abdomen, and thus supports the tone. (See Fig. 25.)

We would suggest that these exercises be practised with

medium tones, and thereby be secured greater tension of the chords.

It should be remembered that the first duty of the vocal chords is that of opening and closing the glottis, — the portal of the lungs. Shut the vocal chords as soon as the air is inhaled, and then *lock* it in the lungs; when this is done, and sound is to be emitted, allow only so much of an opening as is actually necessary; for if there is too little tension of the vocal ligaments, too much air is wasted. The wider the crevice, the more freely can the wind blow through; but the sound will vary in proportion to the size of the opening.

It is one thing to train the organs by producing good tones; it is quite another to produce good tones by training the organs.

For full, round tones, practise vowels that will admit of rounding and protruding the lips. Keeping the lips flat, when they should be rounded, will very greatly change the quality of the voice. In proportion as the lips protrude in producing low tones, the larynx sinks and the chords relax.

To reach the higher tones, draw the lips to or toward a smiling position.

## THROAT CONTRACTION.

The minister uses his voice once a week, sometimes oftener, and in a few years he finds it is worn out. What is the reason? Simply contraction of the pharynx. The opening is too small for the force sent through it, and a straining and rasping are kept up until Nature rebels, and the effort can be continued no longer.

A little careful practice, such as is given in our voice exercises, will bring about the desired results. The throat will open readily in response to the thought; a free use of the lips will be acquired, and the tones will locate themselves forward.

## THE TEACHER.

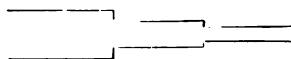
A teacher's voice is used somewhat differently from that of a minister, but with very much the same results. Not needing the same force, the throat is not strained so much, but is otherwise injured by the voice being kept in one groove or channel for consecutive hours of labor; the chords sometimes becoming paralyzed from lack of proper and varied exercise in their use. For this we would suggest a more careful modulation of the voice. Avoid monotony in the use of the voice in the school-room, as well

as in every other place. Teachers should be especially careful (in cold weather) to breathe through the nostrils after passing the whole day in the warm, close school-room, and using the voice so continuously. It is better to avoid all conversation during the walk home, as very few can talk during a walk of even one block without inhaling some air through the lips. By practice you can accustom yourselves to closing the lips the instant the breath is needed.

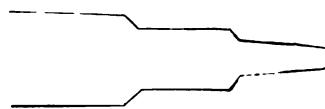
One of the best breathing exercises a teacher can take is going upstairs, about three flights, with the mouth shut, and *keeping* it shut, until the quickened breathing is once more normal. Talking or laughing should be avoided until that normal condition of the lungs is attained. By observing this caution, the stairs, which often seem a *curse* to the teacher, will prove a *blessing*. The clothing should be easy about the waist, so as to allow and encourage deep breathing, in place of clavicular (upper chest) breathing.

"In every voice there are three registers or classes of tones,—chest, medium, and head tones. In singing, the first and last are subdivided into lower and upper chest, lower and upper head tones. A change in the register always means a change in the larynx. While many teachers say nothing about registers, all have the same

aim; namely, so to smooth the voice that as you pass from one to another, the change will not be perceptible. The following represents a voice with bad registers: —



“It is very noticeable when the change is made from one to the other. The work must be done very carefully and systematically; not attempting to cut off the corners all at once by practising on the tones where the break occurs, but working from above and below until the result obtained is more like this: —



“Then let it be strengthened, built up. This is what is known in singing as the Italian method.

“It might be illustrated thus: O O O O. The first represents the voice reduced to pure sweet tones; the second, the same with power added; then the third, and so on, until the greatest power of which it is capable has been attained.

“The great mistake made by singers is not knowing when they have reached the limit; and many who possess voices of only O power are trying to use one of O power.

"In the reading as well as in the singing voice, one should be able to go from chest to medium or to head tones without any apparent effort or without a break. While a medium tone is generally the pleasantest for ordinary conversation, the others should be ready to respond instantly if needed."<sup>1</sup>

**THE FOOD PASSAGE.—THE AIR PASSAGE.**

Below the larynx lies the trachea, or air passage, and back of that the œsophagus, or food passage. This food passage is composed of cartilages, normally closed, which open only one at a time. It is separated from the air passage by a light, thin membrane. Below this the trachea, or air passage, branches off and forms the bronchial tubes, which are also exceedingly sensitive parts of the vocal apparatus.

Without dwelling upon the causes of bronchitis, etc. (for they are to a great extent those already mentioned as affecting the other organs), we will say that all bronchial difficulties can be relieved and prevented by careful and persistent vocal gymnastics, such as will put all tones well forward, and leave the throat an open, unobstructed passage-way; and above all follow our directions under

<sup>1</sup> Prof. W. L. Tomlins, Chicago.

Voice Exercises, for keeping an active chest, and thus prevent the effort and consequent exhaustion that are brought to bear upon the bronchial tubes and the lungs.

#### THE EUSTACHIAN TUBE.

This tube derives its name from the discoverer, a learned Italian physician by the name of Eustachius, who died at Rome, 1574.

It is a slender pipe, affording a passage for the air from a cavity in the ear to the back part of the mouth. It extends from the inner side of the tympanum, and opens at the back of the nostrils.

It is exceedingly delicate and sensitive; hence great caution should be observed in snuffing liquids for the cure of catarrh. Many cases of deafness have arisen in consequence of the misuse of various liquids for this purpose. (See page 45.)

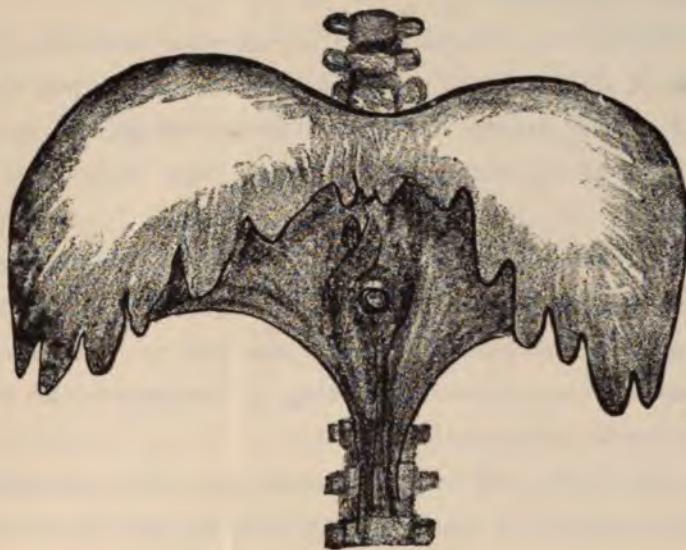


FIG. 8.

Fig. 8 represents the irregular dome shape of the diaphragm as it is in the body during its relaxed state; the digitations of the anterior border are those which correspond with digitations of the transverse abdominal muscle. The crura running down upon the anterior surface of the vertebral column, and the aortic and œsophageal openings are also indicated.

NOTE.—We are indebted to Mr. Edgar S. Werner, of New York, for Figs. 8-14 inclusive. These are from his well-known publication, "The Diaphragm," by J. M. W. Kitchén, M.D.

**DIAPHRAGMATIC vs. CLAVICULAR BREATHING.**

We are now brought to the consideration of the foundation of all voice work; that is, proper breathing and control of the breath. By control of the breath we mean control of the diaphragm, as this is the only way to secure it.

This has been the subject of much contention. We have taught and practised the diaphragmatic breathing for years, and can testify to its ease and power. The superiority of diaphragmatic breathing, as compared with the clavicular, is thus set forth:—

First, the system which will enable us to take the greatest amount of air into our lungs with the least effort must be declared the best. Of all methods of breathing, the clavicular, or high, breathing furnishes the *smallest* amount of air with the greatest effort.

Second, the diaphragm is the principal factor in respiration, and hence the natural conclusion is that abdominal breathing is only following the dictates of Nature.

Third, “it is impossible to bring out the full abilities of the phonating and articulating mechanism, unless the whole of the air-propelling and controlling apparatus is harmoniously used; and of this apparatus the diaphragm

is the most important part. The clavicular type is particularly well shown in women who have constricted waists."<sup>1</sup>

The gentleman above quoted, in speaking of a lady who had received lessons from those who were reputed to be the very best vocal instructors on both sides of the ocean, said of her breathing, "It was almost wholly clavicular in its type. What a commentary on the *best* instructors!" Most warmly, most cordially, do we take Dr. Kitchen by the hand for saying that "the corset is the worst enemy of the diaphragm." In our teachings and lectures we have ceased to call it a corset, but speak of it in more truthful terms as a *curse it*.

We desire to add a word in reference to abdominal breathing. The term is misleading. We would suggest the use of the word "diaphragmatic" or "diaphragm" breathing. Serious results have followed in the practice of abdominal breathing, as it is generally understood. The *abdomen* does not breathe, the *chest* does not breathe; yet we have abdominal breathing and chest breathing.

Correct abdominal breathing is a healthful and invigorating exercise; for in the contraction of the diaphragm, it presses upon the stomach and liver, which lie directly underneath. This movement upon the stomach is a promoter of good digestion. The term "abdominal breath-

<sup>1</sup> Dr. Kitchen.

ing" derives its name from this forward movement of the abdomen.

"When the diaphragm is in use, the action is called diaphragmatic breathing, and sometimes, though incorrectly, abdominal breathing. When the lower ribs are brought into play, the act is known as costal, or rib, breathing.

"If the upper ribs take part, the movement is called clavicular breathing; so called because of the motion being prominent under the clavicular, or collar, bones. Sometimes dorsal breathing is mentioned. This is when the dorsal part of the vertebral column is somewhat straightened, in which position the ribs have a better chance to act their full capacity."<sup>1</sup>

When we use the term "diaphragmatic breathing," we include abdominal, costal, and dorsal; that is, front, side, and back. The diaphragm is a muscle extending through the body, fastened all around, much higher in the front than in the back, separating the lungs and heart above from the stomach and liver underneath. The diaphragm forms a floor to the lungs and a roof to the abdomen. We would liken it, in appearance and action, to a drum-head,—when loose and uncontrolled, giving very uncertain tones; when drawn tense and controlled, giving a solidity

<sup>1</sup> Dr. Kitchen.

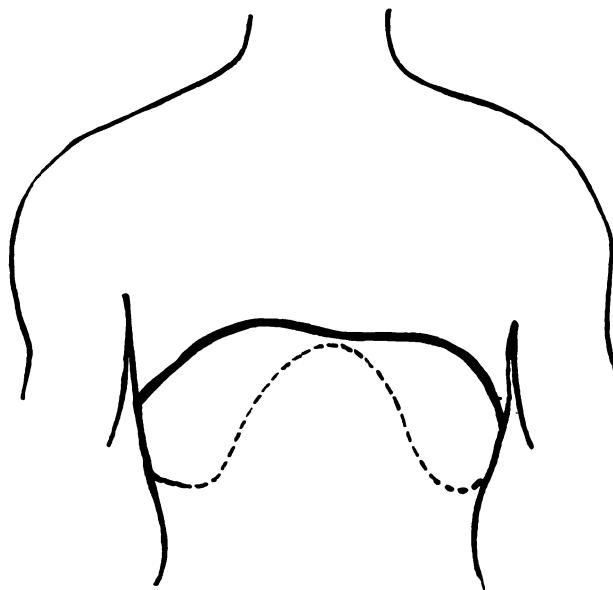


FIG. 9.

Fig. 9 represents an outline of a lateral section of the upper part of the trunk. The extreme superior curvature of the diaphragm is represented by the irregularly convex heavy line crossing the body below the armpits. The dotted line represents the anterior and antero-lateral margins of the diaphragm, following the border of the costal cartilages. The position given is that of the diaphragm during its relaxed state.

which can be obtained in no other way. The abdominal, costal, and dorsal muscles (which we will call waist muscles) act as do the strings around a drum; that is, they are tightened by muscular action (not by corset strings) to cause tensity of the diaphragm, as the strings around the drum are tightened to cause tensity of the drum-head.

Every part of the lungs should be filled. To do this there must be expansion at the waist to allow the diaphragm to pass down, and thus make room for the inflated air-cells. If the clothing is sufficiently loose, it is comparatively easy to acquire this deep breathing; but it is quite another thing to control the breath after getting it there.

To control the breath, draw around you an imaginary elastic belt, and, while you inhale, you should endeavor to expand the waist, and thus fill the belt; *but when you exhale, do not let go of the waist muscles*, because in so doing you give too much freedom to the diaphragm; but try to keep the belt filled, by a steady but not too rigid pressure outward. By thus controlling the diaphragm, you control the expenditure of breath.

This matter of breathing is of such importance, that we will ask the reader to bear with us a moment, while we endeavor to remove any obstacle that may have presented itself on the subject of diaphragmatic breathing. We apprehend one special difficulty, and will meet it here in these pages.

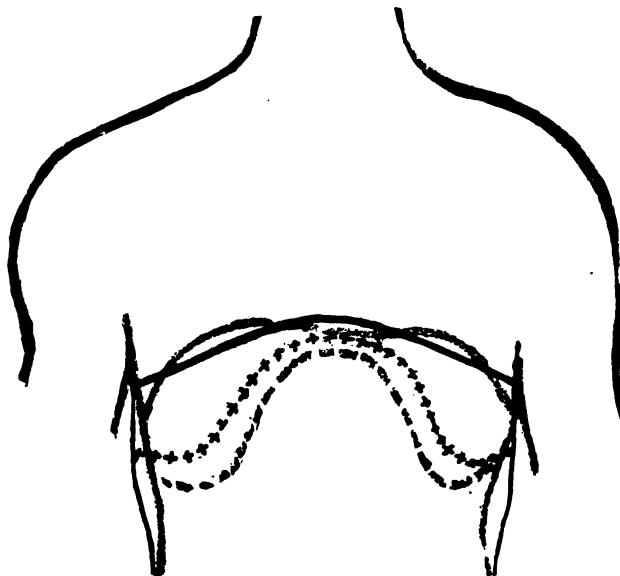


FIG. 10.

Fig. 10 represents the lateral recession of the chest walls, and the elevation or passive arching of the domes of the diaphragm during forced expiration. The pencilled outlines represent the chest and diaphragm during respiratory relaxation; the inked lines, the same parts during forced expiration, the domes of the diaphragm being pressed upward by the abdominal organs, which are displaced by the contraction of the abdominal muscles. It will be noted that the antero-lateral border indicated by the starred line descends, and the chest walls recede, during this action in the parts.

If the diaphragm contracts (or passes down) during inhalation, and the abdomen is pressed forward; and if the diaphragm relaxes (or rises) during exhalation, and the abdominal muscles also relax,—is it not contrary to nature, and consequently hurtful, to contract the muscles of the abdomen in the expenditure of tone? No; the harm arises (not physically, but vocally) from allowing too great freedom to the diaphragm. This undue pressure forces the air out of the lungs, and thus renders it incapable of being controlled. The slower the abdominal muscles reduce their tension, the slower will the air escape from the lungs. In ordinary, or even excessive breathing, when tone is not produced, there is not so much need of regulating the diaphragm; but when voice is required, the diaphragm must (by previous practice) be unconsciously controlled.

Now to the point. If in ordinary breathing we do not need the control, but in voice production we do, then it is only reasonable to assert that we must seize upon the *means* for that control. This can be accomplished in only one way; that is, *we must control the diaphragm by controlling the waist muscles*. We are not going *contrary* to nature when we exert an effort at the waist, but we are *aiding* it. The diaphragm still passes up (or relaxes) during exhalation; but it does not move so rapidly as it is regulated by

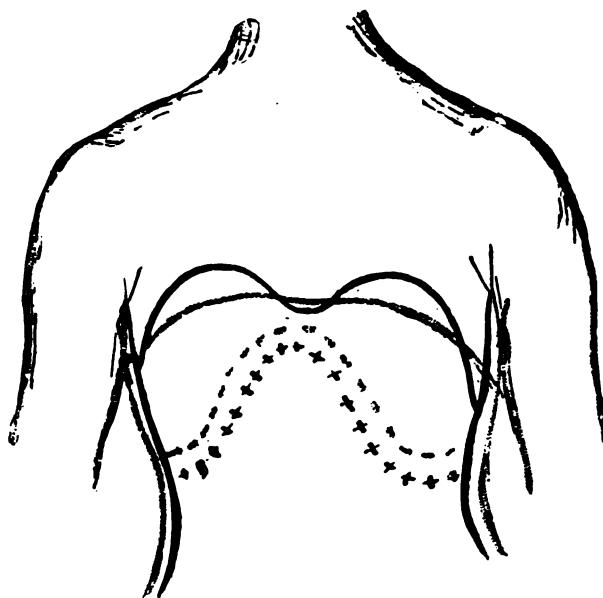


FIG. 11.

Fig. 11 represents in outline the lateral cut of the upper part of the trunk. The pencilled lines represent the trunk, the superior curvature of the diaphragm, and the antero-lateral borders of the organ during respiratory rest and diaphragmatic relaxation. The thin dark lines show the change of shape made in the lateral walls of the chest during a full respiratory effort, the diaphragm contracting. It will be remembered that at the lateral curvature of the ribs the border of the diaphragm is raised and the chest walls are protruded laterally outward during a decided inspiration. This change of position is indicated by the starred lines. It will be also noted that the diaphragm, in thus making a decided contraction, flattens out somewhat. The domes on either side of the median line descend; but the middle of the curvature, especially near the situation of the ensiform cartilage, and the extreme lateral borders, are somewhat elevated above the position of relaxation.

the waist muscles. There should be a conflict going on between the diaphragm and the waist muscles, and the waist muscles must win the victory; hence the outward pressure, the hardening of the waist, the tension of the waist muscles, the filling of the belt, are all terms expressive of the one essential action of the controlling of the diaphragm. If the tone is to be one of long duration, then the movement of the muscles outward should be steady; but in case of an explosive tone the movement should be quick and decided.

The three sets of muscles of which we spoke—the abdominal, or front; the costal, or side; and the dorsal, or back—perform each its function, by *seizing* the diaphragm as it passes down, and *controlling* it, so that the breath is not pushed out at once, but is economized that it may be used as needed.

The chest should be lifted muscularly from off the lungs, and held there at all times, so that there will be no movement of the upper chest either when inhaling or exhaling. This should become habitual, and not simply at times of deep inhalation or special effort. To do this requires an active chest. By the term "active" in this connection, we mean that the chest should be *raised* and *fixed*, as if ready at any moment to receive a blow thereon. This will obviate the tendency, so common among singers and

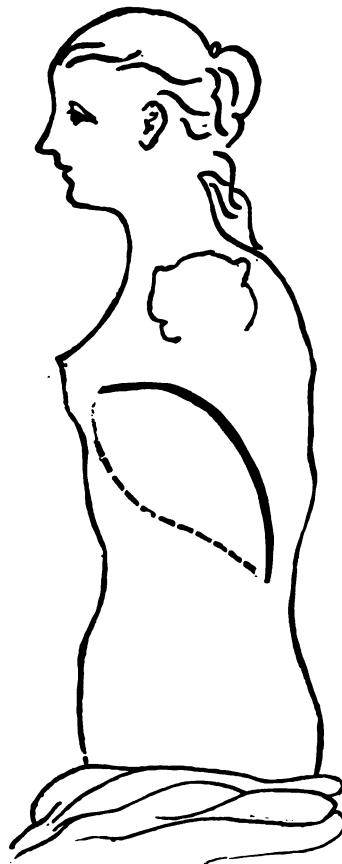


FIG. 12.

Fig. 12 represents an outline of an antero-posterior section of the trunk. The heavy, somewhat diagonally placed curved line represents the upper antero-posterior curvature of the diaphragm in the median line. The dotted line represents the lateral borders or origin of the organ. This is also the position of the diaphragm during relaxation.

speakers, of allowing the abdomen to protrude and the chest to sink. Not only will an ungainly position be mastered, but there will be less of the labored breathing.

Some of our best singers neglect this most important part of voice culture; and the result is that from any part of the concert-room you not only *see* but *hear* them breathe. "There is a certain mechanical expertness which must precede all art;" and bear in mind that "the highest art is to conceal art."

You should learn to master your breath instead of allowing it to master you. When you have gained this mastery of the breath and of the vocal organs by purely mechanical exercises, note the result. You think a tone; all organs respond, and it goes forth perfect. No feeling for it after you hear it. No change of location, but the throat opens, with nothing to obstruct its passage. It goes forth as you will it, easily and naturally. But how is it with the uncultured voice? The tone is started; it does not suit. Immediately the mould is changed,— perhaps more than once before it is right. The mouth is the mould; the voice is the material. As such, it should not be poured forth until the mould is ready; for every change in the mould has its corresponding change in the result. Imagine a founder waiting until the heated mass is poured into the mould before he adjusts it as he wants it.

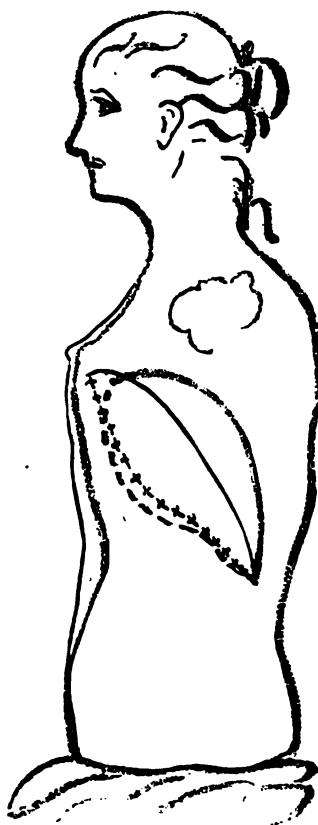


FIG. 13.

Fig. 13 represents the natural and best manner of breathing. It is a combined act of all the respiratory mechanism. The pencilled outline represents the antero-posterior outline of the female trunk during respiratory relaxation. The heavy pencilled outline of the diaphragm represents the average height of the curved domes of the organ ; and the dotted pencilled line, the lateral border of the organ during the same respiratory stage. The inked outline represents the change of shape in the unconstricted female trunk during an ordinary physiological inspiration. The average change of shape and position of the diaphragm during contraction is shown by the inked continuous line. Its border and the elevation in it that occurs during diaphragmatic contraction is shown by the starred line. This is the correct method of breathing when the best vocal and speech efforts are desired.

Perhaps at times the tone strikes too far back, and breaks; or, after locating it properly, there is not breath enough to sustain it. These are but few of the many things which happen to one who has not obtained perfect control over the organs.

Delsarte believed in and taught diaphragmatic breathing. He claimed that "the chest is a passive agent; it should furnish nothing but breath. The mouth and larynx alone are entitled to act." "Sound," he claimed, "is based upon three agents; namely,—

- "The *projective* agent, or the lungs.
- "The *vibrative* agent, or the larynx.
- "The *reverberative* agent, or the mouth.

"The lungs constantly contain a quantity of air, which is the source of life, and with which we cannot dispense without inconvenience to the health and to the voice. The quantity of air requisite for the renewing of the blood, and which is called the breath of life, amounts to a third of what the lungs are capable of receiving. In order to sing or speak, therefore, it must be increased by two thirds, and it is this borrowed breath only which should be given out in singing or speaking. When the lungs are thus filled with air, the sound is produced by escapement. From this it receives greater force; and its production, far from being a fatigue, becomes a relief. Inspiration should always be followed

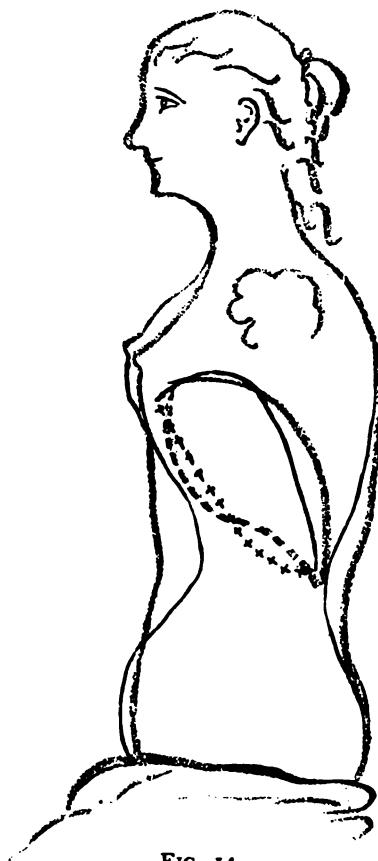


FIG. 14.

Fig. 14 represents an antero-posterior outline of the trunk of a modern *re-formed* Venus de Milo, superimposed over the outline of that famous pattern of female shape as she was created. The modern outline is copied from the average shape of the corsets now manufactured for, and worn by, the women of New York, A.D. 1889. This cut shows the change of shape that occurs, in the upper part of the chest, in trained clavicular inspiration. The natural position of the diaphragm is represented in pencilled lines, and its inefficient action in the re-shaped trunk is shown in the inked lines. This represents the false method of breathing, too common among female voice-users, and sometimes practised by males.

by a suspensive silence; otherwise the lungs, agitated by the act of inspiration, perform the expiration badly."

There are many persons, not excepting teachers of voice culture, who argue against the necessity, or even the practicability of the knowledge of the instrument upon which they play. They claim that it invites attention to the mechanism, and thereby detracts from the result.

It is true there will be a period during which one will consciously apply the principles; but by the habitual application the outgrowth will be spontaneous,—that is, an *unconscious* application.

There is a freedom that arises from ignorance, but we prefer the freedom that arises from knowledge.

"The truth shall make you free." We cannot refrain from once more quoting so good an authority as Dr. Kitchen, in speaking of the objection so often raised by teachers, who claim that there is no need of any pupil understanding any of the mechanism of the vocal organs.

"A workman should know every part of the tool he is using, so as to know when it works well or otherwise, and whether he is using it to the best advantage, or is injuring it; but when he is executing an artistic piece of workmanship, his attention should be directed to the effect sought from the work in hand, and not to the construction and

working of his tool." This will give the knowledge that makes one free.

We wish it were in our power to offer some strong incentive for a more thorough study of the human voice.

Mr. James E. Murdoch, the veteran actor and reader, recently said: "There are hundreds of able writers to one able to give forth beautiful tones in speech. The disciplined speaker becomes familiar with the tones, expressing every kind of passion or feeling, independent of the words; and this power gives confidence, ease, and that conscious strength and reserve power that commands confidence and respect, and carries conviction to the heart.

"The cunning of logic and the elegance of rhetoric cannot vie with the tones of the voice in moving the human mind and heart. The powers of the voice have played a prominent part in determining the destinies of nations; and the undying tones of the great orators, speaking in the cause of civil and religious liberty, are still echoing through the ages."

The pen does much in regard to influencing the world, but a pleasant, cultured voice, uttering the same truths, will stir many a nature to its very depths. The larynx is a wonderful instrument, more wonderful than any ever made by man. Its accompaniments — the lips, palate, and jaw — should be under perfect control.

Richard Wagner says: "The oldest, purest, and most beautiful musical instrument—the instrument to which alone our music owes its existence—is the human voice."

The physiologist may understand every name and position of the vocal apparatus (as an organ-builder of an organ), yet he may not be able to bring anything but discord therefrom.

A teacher of voice culture should be thoroughly familiar with the entire vocal apparatus, and to none other than an artist in this branch should the human voice be intrusted for its development and culture.

### **Part Third.**

**BREATHING AND VOCAL EXERCISES FOR THE  
CULTURE AND DEVELOPMENT OF  
THE HUMAN VOICE.**

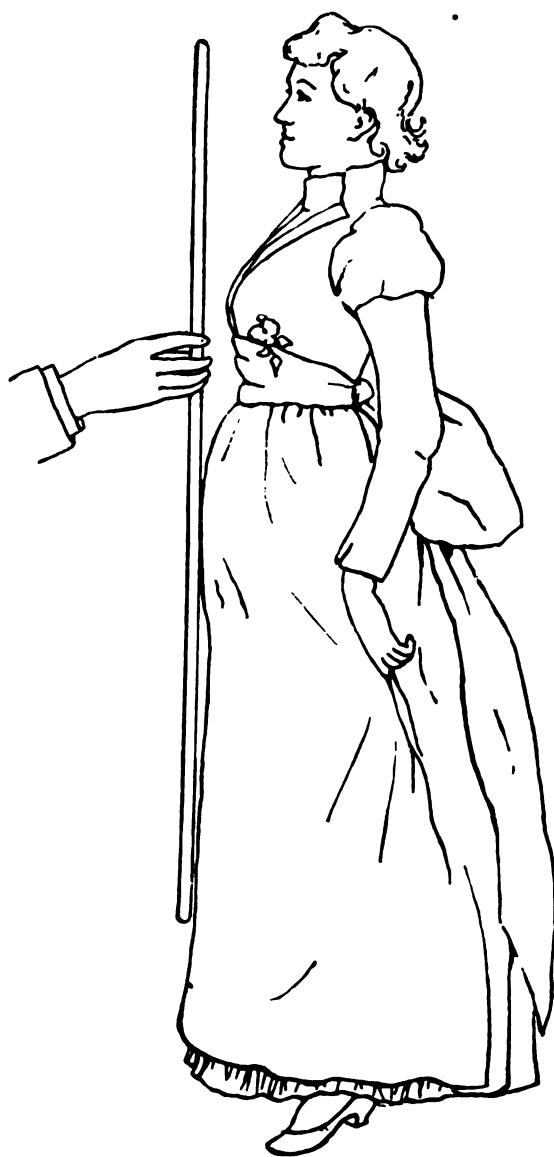


FIG. 15.  
An Incorrect Position.

The incorrect position shows the hips and abdomen too far forward, the chest too passive, and the weight of the body on the heels.



**FIG. 16.**  
**A Correct Position.**

The correct position shows the weight of the body cast toward the ball of the foot, the knees and the abdomen drawn back, and the chest active.

**TEST OF CORRECT POSITION.**

THE position is perfect if, when standing erect, you can rise from your heels without swaying your body forward from the ankles or bending it at the waist.

Take a profile view of yourself before a full-length mirror, and you will detect the slightest swaying when you attempt to rise.

If a stick were placed perpendicularly by the side of your body when you are standing in a correct position, it would indicate a direct line from the ear to the ankle, passing through the shoulder, elbow, hip, and knee.

You will also perceive that the stick, used as in Figures 15 and 16, forcibly illustrates incorrect *vs.* correct position.

**BREATHING.**

Bear in mind that diaphragmatic breathing includes the abdominal, costal, and dorsal; hence we will term them abdominal breathing, costal breathing, dorsal breathing.

In all of these breathing exercises there should be no movement of the body except that caused by the action of the diaphragm and the waist muscles. Keep the upper

chest *raised* and *fixed*; that is, put it there by a *muscular* movement (not by inhalation), as if to receive a blow on the chest.

When you have fully inflated the lungs (without raising the chest) hold the breath a moment, and you will find that the waist muscles and the diaphragm remain stationary, but as soon as the breath is expelled they relax.

Slowly count three mentally, while inhaling, while holding, and while exhaling.

With this thorough understanding, we will proceed with the breathing exercises, under their respective heads.

#### POSITION.

Stand erect; incline the body forward rather than backward. Do not bend the body, but incline it from the ankle. You must control the body before you can control the breath, which is the material of the voice. Remove and avoid all rigidity. Keep an active chest (*raised and fixed*). Draw back the knees, hips, and abdomen. Throw the weight of the body toward the ball of the foot; so much so that you are still resting upon the heels, but bearing your weight so lightly thereon that you would not hurt a child's fingers were they placed underneath.

**EXPLANATION FIG. 17.**

Stand against the wall, touching the heels, limbs, hips, shoulders, and head. Draw in the chin toward the chest. When against the wall, you will be in a very uncomfortable position, as you are not in a correct position. Free yourself entirely from the wall, by swaying forward (not bending), moving only at the ankle-joints, keeping the heels against the wall.



FIG. 17.

## EXPLANATION FIG. 18.

Place the thumbs on the hip-joints, and the fingers in the hollow of the hips. Bend forward at the waist till the dress passes back far enough to see the toe of each shoe. Now stand as erect as you can without allowing the hips or abdomen to move too far forward. You will find your position uncomfortable, and that you are standing heavily upon the heels. As in Fig. 15, sway your entire body forward from the ankle-joint.



FIG. 18.

**EXPLANATION FIG. 19.**

The chest should be made active by muscular movement, not by an inhalation. It should be *kept* there.

When the chest is active, the abdominal wall is slightly relaxed, and the waist muscles easily controlled. When the chest is passive, the abdominal wall expands. If one allows the hips and abdomen to protrude, it not only interferes with the breathing but gives an ungainly position. (See Fig. 15.)

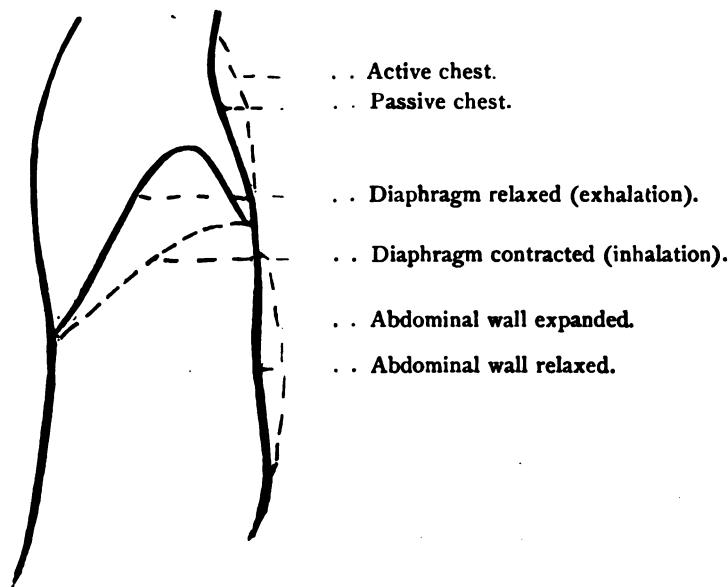


FIG. 19.

**ABDOMINAL BREATHING.**

FIG. 20.

Take position. Press the fingers as indicated on the diagram for abdominal breathing. Take a deep inhalation slowly through the nostrils. The instant you begin to take breath, that instant you should feel a perceptible forward movement against your fingers.

**EXERCISE I.**

Inhale (1, 2, 3).	Hold (1, 2, 3).	Exhale (1, 2, 3).
Inhale (1, 2, 3).	Hold (1, 2, 3).	Exhale (1, 2, 3).
Inhale (1, 2, 3).	Hold (1, 2, 3).	Exhale (1, 2, 3).



FIG. 20.

The position of the hands and the action of the muscles for abdominal breathing.

**COSTAL BREATHING.****FIG. 21.**

Take position. Place the back of the fingers against the lower ribs as indicated on the diagram for costal breathing. Take a deep inhalation slowly through the nostrils. The instant you begin to take breath, that instant you should feel a perceptible sidewise movement against your fingers.

**EXERCISE 2.**

Inhale (1, 2, 3).	Hold (1, 2, 3).	Exhale (1, 2, 3).
Inhale (1, 2, 3).	Hold (1, 2, 3).	Exhale (1, 2, 3).
Inhale (1, 2, 3).	Hold (1, 2, 3).	Exhale (1, 2, 3).



FIG. 21.

The position of the hands and the action of the muscles for costal breathing.

**DORSAL BREATHING.****FIG. 22.**

Take position. Press the thumbs as indicated on the diagram for dorsal breathing. Take a deep inhalation slowly through the nostrils. The instant you begin to take breath, that instant you should feel a perceptible outward movement against your thumbs.

**EXERCISE 3.**

Inhale (1, 2, 3).	Hold (1, 2, 3).	Exhale (1, 2, 3).
Inhale (1, 2, 3).	Hold (1, 2, 3).	Exhale (1, 2, 3).
Inhale (1, 2, 3).	Hold (1, 2, 3).	Exhale (1, 2, 3).



FIG. 22.

The position of the hands and the action of the muscles for dorsal breathing.

**ABDOMINAL, COSTAL, AND DORSAL BREATHING.**

FIG. 23.

Place the hands as if to span the waist, as indicated by the diagram for abdominal, costal, and dorsal breathing. Take a deep inhalation slowly through the nostrils. The instant you begin to take breath, that instant you should feel a perceptible outward movement of the entire waist.

**EXERCISE 4.**

Inhale (1, 2, 3).	Hold (1, 2, 3).	Exhale (1, 2, 3).
Inhale (1, 2, 3).	Hold (1, 2, 3).	Exhale (1, 2, 3).
Inhale (1, 2, 3).	Hold (1, 2, 3).	Exhale (1, 2, 3).



FIG. 23.

The position of the hands and the combined action of the muscles for abdominal, costal, and dorsal breathing.

**DIAPHRAGM FREEDOM.****ABDOMINAL BREATHING. — SIGH.**

PLACE the fingers again in the position for abdominal breathing. Take a deep inhalation through the nostrils until there is a full outward expansion against the fingers. Hold the muscles perfectly quiet for a moment; then expel the air very quickly through the mouth, keeping the chest immovable. It will be found that the abdominal muscles recede very quickly when the breath is thus expelled.

**EXERCISE 5**

Inhale (1, 2, 3).	Hold (1, 2, 3).	Exhale (quickly).
Inhale (1, 2, 3).	Hold (1, 2, 3).	Exhale (quickly).
Inhale (1, 2, 3).	Hold (1, 2, 3).	Exhale (quickly).

## DIAPHRAGM CONTROL.

## ABDOMINAL, COSTAL, AND DORSAL BREATHING.—BLOW.

PLACE the fingers again in the position for abdominal, costal, and dorsal breathing. Take a deep inhalation through the nostrils, until there is a full outward expansion against the thumbs and fingers. Hold the muscles perfectly quiet for a moment. It is now necessary to economize the expenditure of breath; hence it will not do to relax the waist muscles and thereby give freedom to the diaphragm. Draw around you an imaginary elastic belt, and endeavor to keep the belt tense during the blowing. You may endeavor to increase the waist circumference while you are blowing, and the result will be a controlling of the diaphragm, resulting in a control of the breath. Try to blow out an imaginary candle or lamp, some twenty feet distant. Do not expel the breath by one quick impulse, but round your lips, have the aperture small, and then blow as long and as strong as you can, trying to burst the imaginary belt gradually, but not allowing the upper chest to move.

## EXERCISE 6.

Inhale (1, 2, 3).      Hold.      Blow (steadily).

Inhale (1, 2, 3).      Hold.      Blow (steadily).

Inhale (1, 2, 3).      Hold.      Blow (steadily).

## THE PRINCIPLE OF DIAPHRAGM CONTROL.

## SIGHING VS. BLOWING.

IN sighing and in blowing, the diaphragm moves just the same in direction, but not in degree. The waist muscles are passive, and recede in the sighing, but are active (or at least tense), and expand in the blowing. In sighing, the diaphragm says to the waist muscles, "I am going to relax and pass upward, and I want you to follow me." The waist muscles say, "We are willing to do so, for no strength is required of us in sighing."

In blowing, the diaphragm again says to the waist muscles, "Follow me." The waist muscles rebel, and a conflict ensues; but the waist muscles win the victory, at least enough so to effect a compromise.

They say to the diaphragm, "You go your way, and we will go ours. We will not *interfere* with your upward tendency, but we will *regulate* your movement. We were your *servant* in *sighing*; we will be your *master* in *blowing*."

When the diaphragm and the waist muscles go in the same direction, it is an example of parallelism (weakness), but when the waist muscles expand while the diaphragm passes up, it is an example of opposition (strength).

DIAPHRAGM FREEDOM IN VOICE PRODUCTION.

ABDOMINAL BREATHING. — VOCALIZE THE SIGH.

PLACE the fingers again in the position for abdominal breathing, and take a deep inhalation through the nostrils, until there is an outward expansion against the fingers. Hold the waist muscles perfectly quiet for a moment; then expel the air slowly through the lips. At the same time vocalize the sigh as you exhale the breath; that is, give the Italian *A* (*Ah*), but sigh it, allowing the waist muscles to recede slowly. It will be observed that this tone (by the relaxation of the muscles) lacks support. You need not choose any particular note, merely have it audible.

EXERCISE 7.

Inhale (1, 2, 3). Hold (1, 2, 3). Vocalize the exhalation, *Ah*—.  
Inhale (1, 2, 3). Hold (1, 2, 3). Vocalize the exhalation, *Ah*—.  
Inhale (1, 2, 3). Hold (1, 2, 3). Vocalize the exhalation, *Ah*—.

## DIAPHRAGM CONTROL IN VOICE PRODUCTION.

ABDOMINAL, COSTAL, AND DORSAL BREATHING.—SUSTAIN THE ITALIAN A (AH).

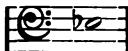
PLACE the fingers again in the position for abdominal, costal, and dorsal breathing. Take a deep inhalation through the nostrils, until there is an outward expansion against the thumbs and fingers. Hold the waist muscles perfectly quiet for a moment. It is now necessary to economize the expenditure of breath, as in the blowing; hence you should again draw around you the imaginary elastic belt, and keep it filled, or endeavor to expand it, while you sustain Italian *A* (Ah).

When you have inhaled, open the mouth and set the position for *Ah*. Hold the waist muscles and diaphragm quiet for a moment after the inhalation.

Look at a point farthest distant from you in the room; inhale and hold the waist muscles quiet; open the mouth for the position of *Ah* (immediately the soft palate will rise, and the vocal chords, the portal to the lungs, will close); aim the tone at that distant point and *keep* it there, supporting it by the slowly outward expansion or tension of the waist muscles.

N. B. — We are very well aware how difficult it is to give vocal lessons through the medium of the pen, but we have endeavored to obviate that difficulty by giving explicit directions, and accompanying the various exercises with musical notations.

EXERCISE 8.



Inhale.	Open the mouth for <i>Ah</i> .	Aim it.	Vocalize it.
Sustain it.	<i>Ah</i> —.		
Inhale.	Open the mouth for <i>Ah</i> .	Aim it.	Vocalize it.
Sustain it.	<i>Ah</i> —.		
Inhale.	Open the mouth for <i>Ah</i> .	Aim it.	Vocalize it.
Sustain it.	<i>Ah</i> —.		

## EXPLANATION FIG. 24

Sit as far back in the chair as you can without touching *your* back to the *chair* back. Make your chest active, and keep the abdominal muscles free. Clasp your hands on each side of the bottom of the chair, as shown in Fig. 24, ready to pull vigorously, without allowing the chest to sink. Sit erect, especially while you pull. Take a deep inhalation. Give Italian *A* (*Ah*) in a pleasant tone.

When you have given about half the tone you desire, pull vigorously, and retain a steady pulling. You will at once observe quite a change in the support of the tone. The pulling can be done to advantage throughout the entire tone.



FIG. 24.

Supporting the Tone. — Tension of the Diaphragm. — Active Chest.

**EXPLANATION OF FIG. 25.**

Have a large book, or object, placed on your hands while giving a tone, and it will be found to require an effort to sustain it. The effort to sustain the object will also sustain the tone, by causing the diaphragm to become more tense.



FIG. 25.

Supporting the Tone. — Tension of the Diaphragm. — Active Chest.

## BRINGING THE TONE FORWARD.—FLEXIBILITY.

## ABDOMINAL, COSTAL, AND DORSAL BREATHING.—TOSS "HO."

FILL the imaginary belt by a deep inhalation; hold the waist muscles quiet for a moment, while placing the mouth and vocal organs in a position for the word *Ho*; round the lips; look at a distant point and aim the word *Ho* at that point, but instead of sustaining it (as was done with *Ah*), toss it five times. There should be an outward and forward movement of the abdominal muscles with each explosive sound. These should all be given in one breath, and tossed gently; always holding the waist muscles quiet till you are ready to vocalize. *Under no consideration should you allow the waist muscles to recede when you begin the tone.*

## EXERCISE 9.



Inhale. Toss (in one breath) *Ho* — *Ho* — *Ho* — *Ho* — *Ho*.

## CLEARNESS AND FLEXIBILITY.

ABDOMINAL BREATHING. — TOSS THE VOWELS  $\bar{A}$ ,  $\bar{E}$ ,  $\bar{I}$ ,  $\bar{O}$ ,  $\bar{U}$ .

FILL the imaginary belt with a deep inhalation; hold the waist muscles quiet till you think a perfect  $\bar{A}$ ; that is, get a perfect position of the vocal organs for  $\bar{A}$ ; then look at the distant point and aim the sound at that point; toss it five times. With this, as with the remaining vowels, there should be an outward and forward expansion of the waist muscles with each explosive impulse. Each of the vowels should be given the required number of times with one breath.

## EXERCISE 10.



Inhale. Toss (lightly and clearly)  $\bar{A} - \bar{A} - \bar{A} - \bar{A} - \bar{A}$ .  
Inhale. Toss (lightly and clearly)  $\bar{E} - \bar{E} - \bar{E} - \bar{E} - \bar{E}$ .  
Inhale. Toss (lightly and clearly)  $\bar{I} - \bar{I} - \bar{I} - \bar{I} - \bar{I}$ .  
Inhale. Toss (lightly and clearly)  $\bar{O} - \bar{O} - \bar{O} - \bar{O} - \bar{O}$ .  
Inhale. Toss (lightly and clearly)  $\bar{U} - \bar{U} - \bar{U} - \bar{U} - \bar{U}$ .

## CLEARNESS, AND SUSTAINED TONES.

Toss *Ho* and *A-E-I-O-U* three times, and *sustain* the *third* tossing of each.

Fill the imaginary belt by a deep inhalation through the nostrils. Let the opening of the mouth and checking of the diaphragm be simultaneous. Toss each of the vowels (as per exercise) three times each, giving a quick impulse to the first two, but prolonging and sustaining the third one of each as long as the tone can be kept steady and clear.

### EXERCISE II.



Inhale.	Toss <i>H</i> — <i>H</i> — <i>H</i>	oo
Inhale.	Toss <i>A</i> — <i>A</i> — <i>A</i>	e.
Inhale.	Toss <i>E</i> — <i>E</i> — <i>E</i>	
Inhale.	Toss <i>I</i> — <i>I</i> — <i>Ah</i>	e.
Inhale.	Toss <i>O</i> — <i>O</i> — <i>O</i>	oo
Inhale.	Toss <i>U</i> — <i>U</i> — <i>U</i>	oo

REMARKS ON SUSTAINING VOWEL SOUNDS.

SOME vowels are simple; some vowels are glides (generally called compounds). By a glide, we mean the name sound of a vowel gliding toward some other vowel, but not completing it; that is,  $\bar{A}$  glides toward  $\bar{E}$ , but does not make the full sound of  $E$ , or else it would be  $\bar{A}\bar{E}$  (as much  $\bar{E}$  as  $\bar{A}$ ), but it is  $\bar{A}e$ . It begins with its name sound, and vanishes toward  $\bar{E}$ , and the vocal organs must change or glide in just that same ratio.  $\bar{A}$  glides toward  $E$ , but  $\bar{E}$  is straight; that is, the vocal organs do not change one particle from the beginning to the end of the sound of  $\bar{E}$ .  $\bar{I}$  is the gliding of Italian  $A$  ( $Ah$ ) toward  $\bar{E}$ ; hence, to sustain  $\bar{I}$ , you must sustain the main component part of  $\bar{I}$ , which is Italian  $A$  ( $Ah$ ).

$\bar{O}$  begins with its name sound, and glides toward  $\bar{OO}$  ( $oozr$ ); hence, to sustain it, you must sustain the name sound, or first position, before it glides.

$\bar{U}$  is composed of consonant  $y$  and  $\bar{o}$  ( $oozr$ ). In sustaining this vowel (long  $u$ ), it will be necessary to pass directly over the consonant and sustain the vowel part.

We have made a diagram of the vowels to be sustained, showing the initial sound and the glide. (See Exercises 11 and 16.)

## PURITY OF TONE.

## TOSS THE VOWELS.

Toss the vowels  $\bar{A}$ — $\bar{E}$ — $\bar{I}$ — $\bar{O}$ — $\bar{U}$  three times each, in the order given. Toss them gently, but clearly, carving each one as neatly as possible.

## EXERCISE 12.



Toss  $\bar{A}$ — $\bar{E}$ — $\bar{I}$ — $\bar{O}$ — $\bar{U}$ .

Toss  $A$ — $E$ — $I$ — $O$ — $U$ .

Toss  $\bar{A}$ — $\bar{E}$ — $\bar{I}$ — $\bar{O}$ — $\bar{U}$ .

## PURITY OF TONE.

## BLEND THE VOWELS.

WITH the same gentle force on the beginning of *A*, swell it, let it vanish toward *E*, then gently blend with *E, I, O, U*.

There should be no break between the vowels in the blending exercise, but each one should be taken up clearly, with a slight swell, and then vanish to the other.

## EXERCISE 13.



Inhale. Blend *A* — *E* — *I* — *O* — *U*.

Inhale. Blend *A* — *E* — *I* — *O* — *U*.

Inhale. Blend *A* — *E* — *I* — *O* — *U*.

## **CLEARING (?) THE THROAT.**

THERE is a tendency with vocalists to clear (?) the throat by a slight cough, usually termed hacking. This is quite often the result of habit, but the continuance of the habit will result seriously.

When the desire comes to hack, avoid it by moistening the throat by the deglutition of saliva; then take Exercise 14.

This will be found very beneficial previous to any prolonged use of the voice. In giving the word *Ha*, it should be done easily, so as not to cause rough, audible breathing, nor trilling of the uvula, but, instead, a quiet, smooth exhalation. Do not take the breath through the lips. Exhale, each time, as long as you can do so easily.

### EXERCISE 14.

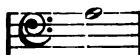
To be given only with breath. N. B. Close the lips after each exhalation.

## PURITY OF TONE.

## S—E—Ū AND WAVE.

GIVE the sound of *S* very gently, blending it into the sound of *Ē*, thereby forming the word *See*. Slowly round the lips, and pass from the word *See* to the sound of *Ū*, making it as smooth as possible. Give these three sounds with one continuous stream of breath and voice, not allowing a break to occur between the elements. Then let the lips form the word *Woo*, which should be given several times with light impulses, but without a break in the tone. Send the *Woo* entirely through the room by slight waves of sound.

## EXERCISE 15.



Inhale. *S—Ē—Ū—Woo, Woo, Woo, Woo, Woo, Woo.*

Inhale. *S—E—Ū—Woo, Woo, Woo, Woo, Woo, Woo.*

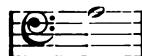
Inhale. *S—E—Ū—Woo, Woo, Woo, Woo, Woo, Woo.*

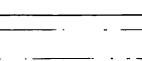
## PURITY OF TONE.

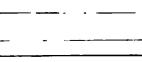
## PREFACING "OO" TO THE VOWELS.

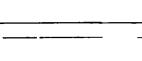
TAKE the sound of  $\overline{OO}$  on just the same pitch and with just the same quality of voice with which the last exercise was ended. Preface  $\overline{OO}$  to each of the vowels in the order given, taking care to blend it with the vowel, not allowing it to end abruptly. Begin each vowel very easily, swell it gradually, then hold it steadily till the vanish. When a vowel sound has an initial sound gliding toward another, hold the initial sound so long as you desire to retain the tone.

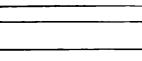
## EXERCISE 16.

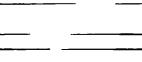


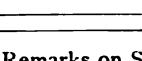
Inhale.  $\overline{OO} - A$    $= \bar{A}$  (ate).

Inhale.  $\overline{OO} - E$    $= \dot{E}$  (eve).

Inhale.  $\overline{OO} - Ah$    $= \ddot{A}$  (arm).

Inhale.  $\overline{OO} - Ah$    $= \bar{I}$  (ice).

Inhale.  $\overline{OO} - Ah$    $= OU$  (our).

Inhale.  $\overline{OO} - Awe$    $= \dot{A}$  (all).

Inhale.  $\overline{OO} - Awe$    $= OI$  (oil).

Inhale.  $\overline{OO} - O$    $= \bar{O}$  (old).

(See page 113. Remarks on Sustaining, etc.)

## FOCALIZING.

**E** (EVE). — **A** (ATE). — **AT** (AT). — **ARM** (ARM). — **ALL** (ALL). — **OLD** (OLD). — **OOZE** (OOZE).

PLACE the point of the tongue against the lower front teeth, draw back the corners of the mouth, and give *E* as in the word *eve*. Open the mouth a trifle wider, and give *A* as in the word *ate*; a little wider for *A* as in the word *at*; still wider, a smiling position, for *A* as in the word *arm*; drop the lower jaw, draw in the corners of the mouth, and give *A* as in the word *awe*; round the lips, and have the aperture small, and give *O* as in the word *old*; keep the lips rounded, make the aperture smaller, and give *OO* as in the word *ooze*. Do not close the lips from the first to the last vowel sound. Think a perfect position for each vowel, and see that the position does not change one particle while giving the tones, except in case of the glides; that is, *A* as in *ate*, and *O* as in *old*. You should be able to give them so perfectly that you can feel the vibration of each element, as designated, on the diagram (Fig. 26). Each tone should be light, clear, and of but few seconds' duration.

## EXERCISE 17.



Inhale.	<i>E</i>	—	—	—	—
Inhale.	<i>A</i>	—	—	—	—
Inhale.	<i>Ä</i>	—	—	—	—
Inhale.	<i>Å</i>	—	—	—	—
Inhale.	<i>Å</i>	—	—	—	—
Inhale.	<i>O</i>	—	—	—	—
Inhale.	<i>Ö</i>	—	—	—	—

## REMARKS ON FOCALIZING.

IT is often argued that the new school, ever on the alert for any progressive move, does not sanction the focalizing of a tone against the hard palate, "as the theory is old;" but, instead, it should be aimed at the bridge of the nose, or, as the Delsartean would say, the dominant centre. Delsarte taught that the normal point for this guidance of reverberation was in the palatine arch. The theory of aiming the tone against the hard palate is no older than the one of aiming it at the bridge of the nose, but it is a much safer one to follow in the absence of the living teacher. The latter method has proved detrimental to many a pure voice, making it nasal, in the attempt to strike the bridge of the nose, as it very naturally takes the route leading to the nose.

We may say again, and even more emphatically than before, aim every tone forward, and just as far forward as possible, and the vibrations and reverberations will be governed by the element on which the tone is sustained, and the pitch and quality of that tone.

ILLUSTRATION OF EXERCISE 17.

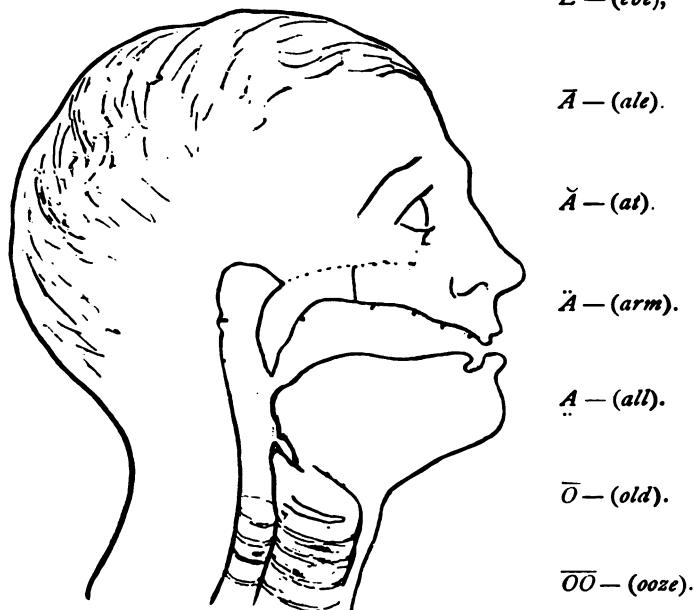


FIG. 26.

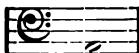
## OPENING THE PHARYNX.

## BROADENING THE TONE.

THINK a gape and give the sound of *Awe*.

Open the mouth slowly when you inhale, and as you feel the breath passing back in the throat, open the pharynx as though you were trying to swallow the base of the tongue. Come just as near gaping as you can without being obliged to gape, then with the out-going breath give the sound of broad *A* (*Awe*). Let it roll out rather lazily, so that the vocal chords will be very much relaxed. Be sure to take the breath through the lips for this exercise, as that is the natural method when yawning. This exercise will lower the base of the tongue, raise the soft palate, enlarge the pharyngeal cavity, and produce what the late Professor Monroe used to call "the pear-shape of the throat."

## EXERCISE 18. .



Inhale (through the lips).      Depress the tongue.      Give *Awe* —.

Inhale (through the lips).      Depress the tongue.      Give *Awe* —.

Inhale (through the lips).      Depress the tongue.      Give *Awe* —

ILLUSTRATION FOR EXERCISE 18.

The Gaping Exercise. — Producing the Pear-shape.

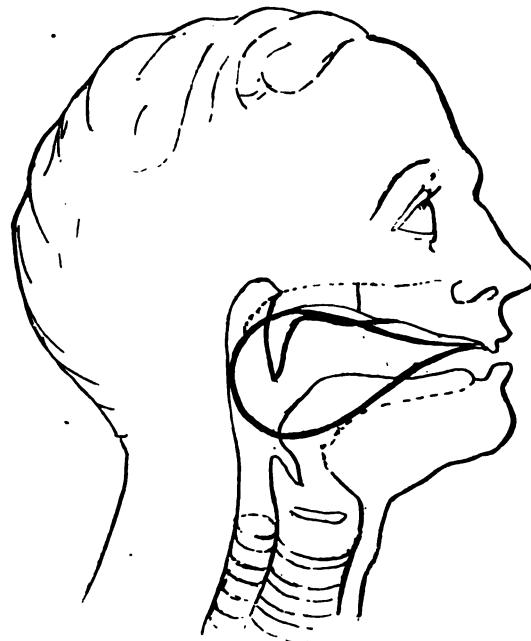


FIG. 27.

FLEXIBILITY OF THE LIPS.—SUPPLENESS OF THE LOWER JAW.

$\bar{E}$ —AWE— $\bar{OO}$ .

GIVE  $\bar{E}$ —*Awe*— $\bar{OO}$  in regular succession, three times in each direction, as per exercise; then in any order as desired, and as rapidly as desired.

To accomplish the object for which this exercise is designed, it is necessary to speak the vowel sounds with exaggerated movement of lips and jaw. It is immaterial whether the vowels are uttered audibly or not, when taking them for self-practice; but for class-work we would suggest that the exercise be a vigorous vocal one. To train the *eye* of the class as well as the *ear*, the teacher should point to an imaginary triangle directly in front of him (after locating each vowel in its respective position), and vary the pointing as he may choose; that is, giving  $\bar{E}$ —*Awe*— $\bar{OO}$ , or  $\bar{OO}$ —*Awe*— $\bar{E}$ , or  $\bar{E}$ — $\bar{E}$ — $\bar{E}$ , *Awe*—*Awe*—*Awe*,  $\bar{OO}$ — $\bar{OO}$ —*Awe*, etc. In the last case they will expect  $\bar{OO}$  given three times, as was  $\bar{E}$  and *Awe*. Have the members of the class sit as fast as they make a mistake; this, of course, is to teach them to be on the alert.

EXERCISE 19.

Take any tone desired, or the exercise may be inaudible.

$E$ —*Awe*— $OO$ .       $E$ —*Awe*— $OO$ .       $E$ —*Awe*— $OO$ .  
*Awe*— $OO$ — $E$ .      *Awe*— $OO$ — $E$ .      *Awe*— $OO$ — $E$ .  
 $OO$ — $E$ —*Awe*.       $OO$ — $E$ —*Awe*.       $OO$ — $E$ —*Awe*.

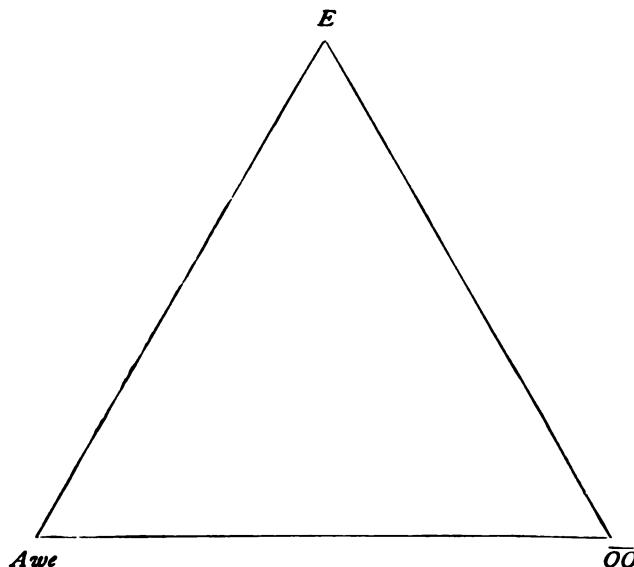


FIG. 28

$\bar{E}$  draws back the corners of the mouth.

*Awe* drops the lower jaw.

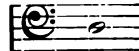
$\bar{OO}$  rounds the lips.

## BREADTH OF TONE.

OO—AWE (PYRAMID).

PLACE the lips in position for *OO*; start the tone very gently, being sure to avoid throatiness, which may be done by focalizing the tone at the lips so that the vibrations are felt there. When you are certain that the tone is forward, let the sound of *OO* gradually swell into the sound of *Awe*; then, without change of pitch, but with increase of volume, let the sound of *Awe* be broadened, until you have reached the full volume of tone on that pitch. Place an imaginary pyramid in front of you, whose apex reaches the ceiling in the centre and whose base rests on the floor. Glide the *OO* gently up to the *Awe*; be sure there is no break between them, but blend them; then glide the *Awe* slowly and steadily from the apex to the base of the pyramid, passing it down on the *outside*, so as to render the effect *vocally* the same as we desire to impress *mentally*,—that is, the *broadening* of the tone. Allow the throat to adjust itself as is done to produce the breadth of tone in giving the *Awe* following the gape exercise.

## EXERCISE 20.



Inhale.      *OO*—*Awe*.  
 Inhale.      *OO*—*Awe*.  
 Inhale.      *OO*—*Awe*.

## VOLUME OF VOICE.

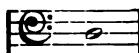
 $\text{OO} - \bar{O}$  (CIRCLE).

PLACE the lips in position for  $\text{OO}$ ; use the same precautions in reference to throatiness as in the preceding exercise. When certain that the  $\text{OO}$  is pure, swell it gradually, without changing the pitch, until it blends with  $\bar{O}$ ; then increase the volume, allowing the throat to adjust itself as required for the full volume of the sound.

Place before you an imaginary tube, quite large; begin the  $\bar{O}$  very easily, placing it in the centre of the opening of the tube; then gradually swell the  $\bar{O}$  until you can fill all sides of the tube, while at the same time you are endeavoring to force the air *through* the tube.

NOTE.—These *imaginary figures* will produce *real results*. Our object is to take the attention from the throat by these mechanical effects, having them serve the purpose of being reflex in their action. The imaginary pyramid in the *room* will produce the pyramidal form in the *mouth and throat*; and the tube and circle in the room will produce the tubular and circular form in the throat.

## EXERCISE 21.



Inhale.       $\text{OO} - \bar{O}$ .  
 Inhale.       $\text{OO} - \bar{O}$ .  
 Inhale.       $\text{OO} - \bar{O}$ .

FLEXIBILITY OF THE VOCAL ORGANS — ELASTICITY  
OF THE VOCAL CHORDS.

wo — wo — wo.

ROUND the lips, and give the sound of *Wo* three times, on the note suggested in Exercise 22. Descend the scale in regular order, repeating the word three times on each note. Continue this until you have reached your lowest note. This should be done with one breath, and with the ease with which you would sing the musical scale. In going from note to note, do not allow any abruptness, but cause the tone to blend as much as possible.

Be sure that you form a definite  $\bar{O}$  on the lips, no matter how low the tone. Do not let it become *Wü*, *Wü*, *Wü*. Economize your breath on the higher tones, as you will need it for the lower ones. Keep the lips round and flexible throughout the entire exercise.

EXERCISE 22.

(Begin with)



Inhale.	Give <i>Wo</i> , <i>Wo</i> , <i>Wo</i> .
Inhale.	Give <i>Wo</i> , <i>Wo</i> , <i>Wo</i> .
Inhale.	Give <i>Wo</i> , <i>Wo</i> , <i>Wo</i> .
Inhale.	Give <i>Wo</i> , <i>Wo</i> , <i>Wo</i> .

Descend to your lowest note.

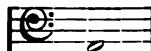
## LOW OROTUND.

BO (SOLID).

THINK a low note, and give the word *Bo*, rounding and protruding the lips, having the aperture at the lips quite small.

A low, full orotund may thus be produced. Place the tone forward, as nearly on the lips as possible, then allow the throat to expand, and the tone will reverberate to the pharyngeal cavity.

## EXERCISE 23.



Inhale.	Give <i>Bo</i> (prolonged).
Inhale.	Give <i>Bo</i> (prolonged).
Inhale.	Give <i>Bo</i> (prolonged).

**VOLUME AND LOUDNESS COMBINED.****BO (VOLUME).**

THINK a high note, and give the word *Bo*, rounding the lips, and having the aperture much larger than in the preceding exercise. The tone should now be aimed at the teeth instead of the lips. Allow the pharyngeal cavity to expand fully for the necessary reverberations.

**EXERCISE 24.**

Inhale.	Give <i>Bo</i> (prolonged).
Inhale.	Give <i>Bo</i> (prolonged).
Inhale.	Give <i>Bo</i> (prolonged).

## SMOOTHNESS OF LOW NOTES.

BO (FLOATING).

THINK a low note, and give the word *Bo*, rounding and protruding the lips, having the aperture quite small. Place the tone as gently as possible on the lips, not allowing any explosive force between the *B* and the *o*. Give the tone as though you desired to *float* it to quite a *distance*, yet retaining the *smoothness*.

## EXERCISE 25.



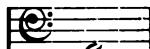
Inhale.	Give <i>Bo</i> (prolonged).
Inhale.	Give <i>Bo</i> (prolonged).
Inhale.	Give <i>Bo</i> (prolonged).

## LOW OROTUND AND CLEAR NASAL TONE.

## GOLDEN (SOLID).

THINK a low note, and give the word *Golden* on that note, rounding and protruding the lips on the *ō*. Prolong the *ō* and gradually blend it into *l*, passing directly to *dn*, without a break in the tone. When placing the point of the tongue up for *d*, it should not be removed till after giving the *n*; thus avoiding the sound of *dən* or *dʊn*, and giving *dn* instead. Retain the same pitch on the second syllable as on the first, though the latter tone will be purely nasal. Endeavor to fill a large room with a volume of sound when giving the vowel *ō*.

## EXERCISE 26.



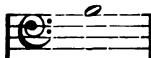
Inhale.      Give *Go* (prolonged) *l—dn* (prolonged).  
 Inhale.      Give *Go* (prolonged) *l—dn* (prolonged).  
 Inhale.      Give *Go* (prolonged) *l—dn* (prolonged).

**VOLUME. — LOUDNESS. — CLEAR NASAL TONE.**

**GOLDEN (VOLUME).**

THINK a high note, and give the word *Golden* on that note, rounding and protruding the lips on the *ō*; prolong the *ō*, gradually blending it into *l*; pass directly to *dn*, without a break in the tone, and without giving the sound of *den* or *dun*. Retain the same pitch on the second syllable as on the first, though the latter tone will be purely nasal. Endeavor to fill a large room with the volume of sound on the vowel *ō*.

**EXERCISE 27.**



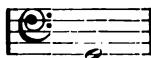
Inhale.	Give <i>Go</i> (prolonged) <i>l</i> — <i>dn</i> (prolonged).
Inhale.	Give <i>Go</i> (prolonged) <i>l</i> — <i>dn</i> (prolonged).
Inhale.	Give <i>Go</i> (prolonged) <i>l</i> — <i>dn</i> (prolonged).

## SMOOTHNESS AND CLEAR NASAL TONES.

## GOLDEN (FLOATING).

THINK a low note, and give the word *Golden* on that note, rounding and protruding the lips on the *ō*; prolong the *ō*, and gradually blend it into *l*, passing directly to *dn* (not *den* nor *dun*). Retain the same tone on the second syllable as on the first, though the latter tone will be purely nasal. Give the tone as though you endeavored to float it to quite a distance, yet retaining the smoothness.

## EXERCISE 28.



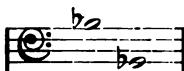
Inhale. Give *Go* (prolonged) *l* — *dn* (prolonged).  
 Inhale. Give *Go* (prolonged) *l* — *dn* (prolonged).  
 Inhale. Give *Go* (prolonged) *l* — *dn* (prolonged).

## TRANSITION OF TONE.

GOLDEN — BO.

GIVE the word *Golden* as marked in Exercise 29. Slightly prolong *Gō*, blend it with *l*, add and prolong *dn*, on the same pitch; then drop down to the tone designated in Exercise 29, and give the word *Bo*, rounding and protruding the lips, and giving the last tone solidity and as full an orotund as possible on that note.

## EXERCISE 29.



Inhale. Give *Gō* (prolonged) *l* — *dn* (prolonged) — *Bo* (prolonged, very low).

Inhale. Give *Gō* (prolonged) *l* — *dn* (prolonged) — *Bo* (prolonged, very low).

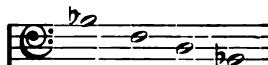
Inhale. Give *Gō* (prolonged) *l* — *dn* (prolonged) — *Bo* (prolonged, very low).

TRANSITION OF TONE.—FLEXIBILITY OF THE VOCAL CHORDS.

**GOLDEN (LIPS AND PHARYNX).**

GIVE the word *Golden* as per tone assigned to it in Exercise 30. Place the tone as far forward as possible, protruding the lips when giving the vowel *ō*; prolong it but slightly, then allow the lips to relax, and repeat the word (quickly) three times on the same pitch, descending, regularly, the notes of the musical scale. Give the word three times on each note. For this exercise, avoid moving the lips after the first speaking of the word, and allow the pharyngeal cavity to expand as nature demands; and do not adjust the chords, but let nature also do that. You will find the chords quite flexible for the low notes.

**EXERCISE 30.**



Inhale. Give (quickly) *Golden, Golden, Golden, Golden.*  
 Inhale. Give (quickly) *Golden, Golden, Golden, Golden.*  
 Inhale. Give (quickly) *Golden, Golden, Golden, Golden.*  
 Inhale. Give (quickly) *Golden, Golden, Golden, Golden.*

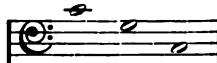
Descend regularly to your lowest note.

## TRANSITION OF TONE. — FLEXIBILITY OF THE VOCAL ORGANS.

LUL, LUL LU, LUL, LU (TEETH, HARD PALATE, PHARYNX).

BEGIN with the tone designated in Exercise 31, and give *Lul*, etc., twice on that tone, then twice on the second one given, and twice on the third. Practise on this exercise until the point of the tongue is very quick and accurate in its work. The first tone will be purely dental, the vibrations being distinctly felt at the teeth; the second will partake of an entirely different quality, being focalized against the hard palate; while the vibrations of the third will be felt, chiefly, in the pharynx. The larynx will depress itself for each tone; hence there is no need to "set the larynx," for nature will do that.

## EXERCISE 31.



Inhale. Give (very quickly) *Lul, lul lu, lul, lu.*  
Inhale. Give (very quickly) *Lul, lul lu, lul, lu.*  
Inhale. Give (very quickly) *Lul, lul lu, lul, lu.*

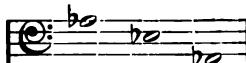
## TREMOLO TONES.

COLD.

TAKE a very high note, and give the word *Cold* on that note. Break the one *ō* into many little *ō*'s. Do not hold the chords too rigidly, but allow them to adjust themselves. The trembling of the hand has often been found to be a mechanical aid toward securing the desired effect in the voice.

Take the word *Cold* on the three tones given below.

## EXERCISE 32.



Inhale. Give *Cold* (tremolo).

Inhale. Give *Cold* (tremolo).

Inhale. Give *Cold* (tremolo).

NOTE. — The reader, as well as the singer, will find it to his advantage to take such passages, in which the word occurs, as will appeal to the three elements of his nature ; that is, the *mental*, *moral*, and *vital*. We will quote three examples for the reader, in each of which the quality of the voice will materially change, especially on the word expressing the *thought* of cold, though it may not be the *word* cold.

**EXAMPLE.**

Mental quality : “ Cold ! Cold ! I feel her icy hands,  
Her icy hands.”

Moral quality : “ In she plunged boldly,  
No matter how coldly  
The rough river ran.”

Vital quality : “ Making the blood of the listener cold.”

**MEDIUM TONES. — “AH.” — PITCH vs. DISTANCE, NARROWNESS vs. BREADTH.****MUSICAL SCALE (PYRAMID.)**

BEGIN Italian *A* [*ah*] on a low note, and sing the scale. In the majority of voices it will be found that before reaching the last note of the octave, the tone becomes narrow, light, and lacks force, often breaking. This is unnecessary, and may be avoided. The higher tones may be strengthened and broadened by following the suggestions herewith given.

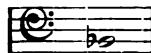
Instead of thinking *pitch*, think *distance*, and an *increase* in distance, not only in *length* but in *width*; that is, place before you an imaginary pyramid, lying on the floor, the apex toward you but some little distance from you.

Begin your first low note at the apex of the pyramid, giving Italian *A* [*ah*]. Sing up the scale without a break. If you have thoroughly fixed in your mind (and in the room) the imaginary pyramid, you will readily perceive that each succeeding note will cover more space in length and width; and your last one will, instead of being the *narrowest*, be the *broadest* of all, and you will be able to sustain it with great power. Yes; this took your entire thought from your throat! That is just what we desired.

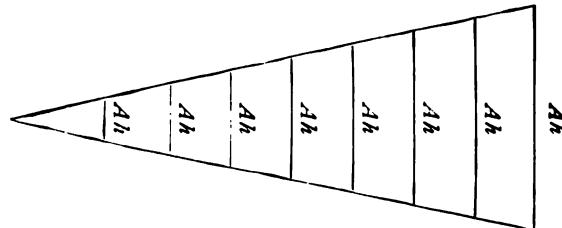
Let us note the result. The large pyramid in the room produced a miniature counterpart in your mouth and throat. Try it again, and you will observe that the *small* pyramid has its apex apparently above the larynx ; and every note you sing increases the size of the pyramid up through the pharynx, until the base of the pyramid rests with one end against the soft palate, and the other against the tongue.

## EXERCISE 33.

(Begin with)



Inhale. Give



## SUSTAINING LOW TONES.—“AH.”

## REVERSED PYRAMID.

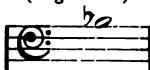
WHEN you have successfully accomplished the sustaining and broadening of the high tones, reverse the order of exercises by reversing the pyramid, thus sustaining the low tones.

When you have finished sustaining your highest tones, take a deep inhalation, and strike the same note in pitch, but with gentler force, again giving *Ah*. Descend the scale very slowly (on the reversed pyramid, whose base is now nearer you), almost lazily, as you give the lower tones.

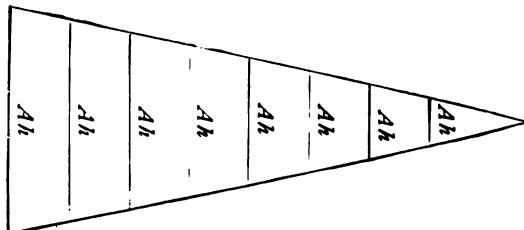
Does the pyramid in the mouth become reversed? Certainly. The apex is now against the hard palate, and the base reaches the pharynx.

## EXERCISE 34.

(Begin with)



Inhale. Give

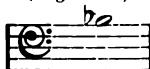


**MEDIUM TONES FOR CALLING OR SHOUTING.****MAXIMUM OF POWER WITH MINIMUM OF STRENGTH.**

GIVE the word *Bo*, on your lowest medium tone. Again place the pyramid before you, with the apex toward you; but place the base of the pyramid at a great distance from you. Increase the force as you increase the distance. Endeavor to cover more and more space in length and width with each tone. Take an inhalation between each tone, and feel that you are calling, instead of singing, the word *Bo*. You should aim the *o* each time at the upper front teeth, and hold it there, increasing the opening of the mouth and throat with each successive tone, as the loudness depends upon the amplitude or extent of the vibrations. Cease calling any tone that causes rasping of the throat. Be content to have the voice carry to the second and third distant point, until you increase the power to additional points with the same ease. The tones should be located quickly and accurately against the upper front teeth.

**EXERCISE 35.**

(Begin with)

Inhale.    *Bo, Bo, Bo, Bo, Bo, Bo.*

## MEDIUM TONES FOR CALLING.

BOAT AHoy !

LOOK at some point farthest distant from you in the room, and aim the words at that point. Sustain the *o* on *Boat*, give the *A* of *Ahoy* quickly, and sustain the diphthong *oy*. It is the *initial* sound of the diphthong (*a*) that should be sustained, preceded by *h*, making it *Ha*; then, as you end it, it will glide toward *e*, forming the sound of *Hoy*.

Aim the next tone at a point *farther* distant,—say, out of the window, at some object,—and sustain each part as before. Call the one farthest distant as *pleasantly* as possible, as though actually calling, with a certain degree of merriment, to a friend.

## EXERCISE 36.



Inhale. Call *Bo* (prolonged) *t—a* (quickly) *ha* (prolonged, vanishing toward *e*).

Inhale. Call *Bo* (prolonged) *t—a* (quickly) *ha* (prolonged, vanishing toward *e*).

Inhale. Call *Bo* (prolonged) *t—a* (quickly) *ha* (prolonged, vanishing toward *e*).

Inhale. Call *Bo* (prolonged) *t—a* (quickly) *ha* (prolonged, vanishing toward *e*).

Inhale. Call *Bo* (prolonged) *t—a* (quickly) *ha* (prolonged, vanishing toward *e*).

## HEAD TONES.

WHEN the chords become too much relaxed by over use or wrong use, they need rest, to allow Nature to do her work; she may be greatly aided by counteracting the relaxed condition, if the proper means are employed.

The head tones serve this purpose, as it tightens the chords. To produce a clear head tone, hum *m* on a high key, then add to it the Italian *a* (*ah*), thus producing the word *Ma*.

When once the tone has been located, take the word *Bo*, as an exercise, and run the musical scale, or as many notes as possible, by beginning on your lowest head-tone; as with the medium tones, increase the *power* by increasing the *cavity*. Avoid *frowning* when giving the high tones. You should keep a head-tone directed to the teeth, the same as the mediums; and by so doing you can force a tone with all the power possible, without breaking it.

Echoes may easily be formed, if you are particular in locating these medium and head tones; keeping a steady current of air, and not moving the lips in speaking the words.

## EXPLOSIVES.

Ā—Ē—Ī—Ō—Ū.

NOTE. — To avoid rasping, set a perfect position for each vowel, and strike it accurately, using but little breath. Endeavor to hold back the breath, but send forth the tone. Aim the vowel at a distant point, and send it there by bursting the imaginary belt quickly. One great secret of power, in all explosive tones, is to aim them against the hard palate, and have the throat sufficiently opened.

## EXERCISE 37.



Inhale. Hold. Set the mould for Ā. Give (explosively) Ā—Ā—Ā.  
 Inhale. Hold. Set the mould for Ē. Give (explosively) Ē—Ē—Ē.  
 Inhale. Hold. Set the mould for ī. Give (explosively) ī—ī—ī.  
 Inhale. Hold. Set the mould for ō. Give (explosively) ō—ō—ō.  
 Inhale. Hold. Set the mould for ū. Give (explosively) ū—ū—ū.  
 Give, once each, explosively, Ā—Ē—ī—ō—ū.

## EXPLOSIVES.

HO — HOLD — HALT — JUMP — BACK — BLAZE.

GIVE each word with explosive force. Keep the position for each final consonant closed. Send all the force beyond the shut position, and open the throat sufficiently for each word. Aim the word at a distant point, and force the column of air against the hard palate. Burst the belt quickly. Give each vowel, full but short, except the *a* in *Blaze*, which should be held for sustained power.

## EXERCISE 38.



Inhale. Hold. Set the mould for *Ho*. Give (explosively) *Ho, Ho, Ho*.

Inhale. Hold. Set the mould for *Hold*. Give (explosively) *Hold, Hold, Hold*.

Inhale. Hold. Set the mould for *Halt*. Give (explosively) *Halt, Halt, Halt*.

Inhale. Hold. Set the mould for *Jump*. Give (explosively) *Jump, Jump, Jump*.

Inhale. Hold. Set the mould for *Back*. Give (explosively) *Back, Back, Back*.

Inhale. Hold. Set the mould for *Blaze*. Give (explosively) *Blaze, Blaze, Blaze*.

## EXPLOSIVES AND SUSTAINED FORCE.

IN the following sentences the words that are put in Italics are to be given as explosives, while the others are sustained.

The whole sentence, in each case of sustained force, should be a chain of as many unbroken links as there are syllables. The emphatic words are represented by the larger links, and simply require the swelling of the tone to express them. We will place a bar, or dividing line, between the sentences, showing where each sustained force or chain ends.

We will draw a circle around the words which require the greatest force (not explosive, but sustained), and these should have increased volume. Sometimes this circle will occur around but one syllable of a word, which is generally the accented syllable. Wherever the circle is seen, place the main power of that syllable or word (be it a vowel or a consonant, though it is generally a vowel) against the hard palate, and as you cause it to swell in volume, allow the throat to expand fully, thus opening the pharynx for full reverberation.

Look at some point quite distant from you, aim your explosive words there, and give them with explosive force, and also aim the sentence to be sustained, and *keep* it sustained.

If you work as you should, step by step, on the vocal exercises, until you reach those of explosives and sustained power, you will be able to give these very strong examples with surprising ease, and without rasping or otherwise injuring the throat. These exercises, if correctly taken, are actually fascinating, as they are a tonic to the system from which can come no reaction.

EXERCISE 39.

Explosive and Sustained.

Jump! | far out boy into the wave  
| Jump! or I fire.  
For ward the Light Brig ade!  
Charge for the guns.  
O lea for Cas tile!  
Arm! | Arm!  
It is I — it is the can non's opening roar.  
Rouse ye Romans! | Rouse ye slaves!

## BLENDING AND CONTINUITY.

## ALWAY AND ALWAY.

WE use the above words, *Alway* and *alway*, as key words for the practice of blending and for the continuity of the tone. They can be practised upon any key, and thus prefaced to any reading (simply as a means to an end) to secure *continuity* and *sustained* power on *heavy* passages and *continuity* and *flexibility* on *lighter* passages. Commence with a high medium tone, full force and sustained. Swell each syllable, and blend it with the succeeding one. Reduce the tone and the words, gradually, from the full medium, sustained, to a pure conversational tone, though still sustained. Herein lies the beauty of utterance in the light narrative. There should still be the same blending of words and continuity of tone: then, and then only, will we get the real charm of reading, and the soul-felt expressions poured forth in a continuous stream, not spattered or broken, only as the thoughts are broken for the necessary modulations.

How beautifully this is illustrated in the few lines we quote from "The Face against the Pane"!

It will be observed that the metrical accent preserves

the beauty of the poetry, and places it, with the melody and rhythm, just where the poet would place it in his scansion.

“She will never watch again,  
Never watch and weep at night;  
For those pretty, saintly eyes  
Look beyond the stormy skies,  
And they see the Beacon Light.”

**EXERCISE 40.**

(Al) (way) (and) (al) (way.)

Medium tone (full force): Alway and alway.

Medium tone (less force): Alway and alway.

Medium tone (still less force): Alway and alway.

Upper chest tone: Alway and alway.

Medium chest tone: Alway and alway.

Lower chest tone: Alway and alway.

Very low tone: Alway and alway.

Aspirate tone: Alway and alway.

Whisper: Alway and alway.

Conversational tone (light orotund): Alway and alway.

PRACTICAL APPLICATION OF BLENDING AND  
CONTINUITY.

EXERCISE 41.

As an unbroken chain between the bars.

Medium (full force): | Hear me, ye walls, that echoed to the tread of  
either Brutus. |

Medium (less force): | Hear me, ye walls, that echoed to the tread of  
either Brutus. |

Medium (still less force): | Hear me, ye walls, that echoed to the tread  
of either Brutus. |

Upper chest tone: | The deep-toned thunder rolled along the vaulted  
sky. |

Lower chest tone: | Oh the long and dreary winter! |

Very low tone: | Oh the cold and cruel winter! |

ASPIRATE.

MACBETH. | Didst thou not hear a noise? |

LADY MACBETH. | I heard the owl scream | and the crickets cry. |  
Did not you speak? |

MACBETH. When?

LADY MACBETH. Now.

MACBETH. As I descended?

LADY MACBETH. Ay.

MACBETH. | Hark! | Who lies i' the second chamber? |

LADY MACBETH. Donalbain.

WHISPER.

• | I see the head of the enemy's column rising over the height. | Our only safety is in the screen of this hedge. | Keep close to it; | be silent; | and stoop as you run. | For the boats! | Forward! |

CONVERSATIONAL TONE (BRIGHT AND JOYOUS).

| Give us, | oh, give us, the man who sings at his work! | He will do more in the same time, | he will do it better, | he will persevere longer. | One is scarcely sensible of fatigue whilst he marches to music. | The very stars are said to make harmony as they revolve in their spheres. | Wondrous is the strength of cheerfulness, | altogether past calculation its powers of endurance. | Efforts, | to be permanently useful, | must be uniformly joyous, | a spirit all sunshine, | graceful from very gladness, | beautiful because bright. |

| Insects, generally, must lead a jovial life. | Think what it must be to lodge in a lily. | Imagine a palace of ivory and pearl, | with pillars of silver and capitals of gold, | and exhaling such a perfume as never arose from human censer. |

| Fancy, again, the fun of tucking one's self up for the night in the folds of a rose, | rocked to sleep by the gentle sighs of summer air, | nothing to do when you awake | but to wash yourself in a dew-drop, | and fall to eating your bedclothes. |

BLENDING *vs.* CLIPPING.

ELSEWHERE we speak of keeping the position of **final** consonants closed, in order to avoid the explosive sound caused by the opening of the positions.

By observing this caution, much of the beauty and charm of **reading**, of which we have spoken, may be gained. In reading the following lines from "The Charge of the Light Brigade," there is a tendency to give the *t*'s and *d*'s explosively, especially the final *d* in each line.

"Oh the wild charge they made !  
Honor the charge they made !  
Honor the Light Brigade !"

The beauty is thus marred, as this explosiveness not only jars upon a sensitive ear and good judgment, but smacks of pedantry. Take, for instance, the explosive force following the *t* in the word *Light*. What is the result? A rhetorical pause should follow the word *Light*. But a rhetorical pause, above all others, should be filled with thought; that is, the mind of the speaker acts upon the mind of the hearer during that pause, and his mental magnetic current should not be interrupted; but if the explosiveness follows the *t*, the current is immediately broken. The vowel preceding the *t* should be full and projected into

the *t* position, closing the point of the tongue accurately, and throwing the entire word the distance desired, without letting go of the *t*.

Would that we could sufficiently voice the necessity of this apparent trifle in the matter of speaking, reading, and singing! Thousands of times we have demonstrated to classes the power of thus giving *p*, *t*, and *k*, and *b*, *d*, and *g*.

In order to acquire accuracy in closing the lips for *p* and *b*, closing the point of the tongue for *t* and *d*, and closing the back of the tongue for *k* and *g* (*Go*), we prescribe the following exercise: —

**EXERCISE 42.**

Give decisively, but pleasantly. The character *>* represents the puff of breath or voice.

*Ip — It — Ik* }  
*Ip — It — Ik* } not *Ip > It > Ik >*  
*Ip — It — Ik* }

*Id — Id — Ig* }  
*Id — Id — Ig* } not *Id > Id > Ig >*  
*Id — Id — Ig* }

*Ip — Ippi — Pi — P* (not *P >*).

*It — Itti — Ti — T* (not *T >*).

*Ik — Ikki — Ki — K* (not *K >*).

*Id — Idi — Di — D* (not *D >*).

*Ig — Iggi — Gi — G* (not *G >*).

## PRACTICAL APPLICATIONS OF EXERCISE 42.

## EXERCISE 43.

“ And Concord roused, no longer tame,  
Forgot her old baptismal name.”

THE value of holding the *t* on the word *Forgot*, and then breathing into the pause the very spirit of the selection, cannot be realized without having it vocally exemplified.

“ For, borne on the night wind of the past,  
Through all our history to the last.”

There should not be a break in the first line of the above couplet. In the second, a break in the chain is made at the close of *history*. There need be no explosive sound on the last word of each line. When *p* and *t* come together at the close of a word, then and then only is it absolutely necessary to give the breath sound to *t* (*crept*, *slept*, *wcpt*, etc.).

“ Oh the wild charge they made!  
Honor the charge they made!  
Honor the Light Brigade!”

Hold all the final *d*'s and *t*'s shut, especially, as we said elsewhere, the *t* in the word *Light*.

Do not break the tone after the word *Honor*; in fact, do not allow a break to occur throughout the first and second lines. Neither should you pass hurriedly from the word *Honor*, as the heroism is expressed in the continuity of the *r*.

**BELL TONES.—DISTANT VOICES.—ECHOES.**

THESE may all be learned from a good teacher in one hour, when the voice is otherwise under control. The underlying principles are set forth in these pages (see Head Tones, p. 151); but the author does not deem it wise to go into the details of these special features.

These exercises, above all others, need the living teacher to give a vocal exemplification.

**MONOTONE.**

WHILE monotony is not generally desirable, it may be found to be of much service. An occasional practice of monotone, on various pitches, will largely aid in the strength of the vocal organs for each particular pitch. It will serve also as a guide in steadiness of tone, thereby removing the abruptness so often occurring.

Place the tone well forward against the hard palate, opening the throat, and causing the tone to reverberate to the pharynx. Keep the lips as easy and flexible as possible. No matter how low the tone, do not depress the chin, thinking thereby to depress the larynx. Nature will do her work, but she must have her own way, which will be to depress the larynx for the lower tones,—opening the pharynx instead of contracting it. Each line in the following exercises should be given with one continuous stream of voice, unless otherwise designated by the upright bar.

**EXERCISE 44.**

Each line a monotone.

Upper chest tone: " | Holy, | Holy, |

Lower chest tone: " | Holy, Lord God Almighty. |

Medium tone: " | There was silence, | and I heard a voice saying, |

Low chest tone: | Shall mortal man be more just than God? |

Very low tone: | Shall a man be more pure than his Maker? " |

Upper chest tone: " | Come to thy God in time; " |

Light conversational tone: | Thus saith the ocean chime. |

Low chest tone: " | Storm, whirlwind, billows past, |

Very low tone: | Come to thy God at last." |

The first and last words should be very full, and the tone low.

| Call the watch! |

| Call the watch! |

To be given with medium tone, light and elastic.

| Ho! the starboard watch! A-hoy! |

| Ho! the starboard watch! A-hoy! |

To be given with chest tone, low and steady.

| Ho! the larboard watch! A-hoy! |

| Ho! the larboard watch! A-hoy! |

**FINALE.**

IT should be borne in mind that Part Third of this volume is intended as a gymnastic exercise of the vocal organs. Though special stress is laid upon the mechanism of each exercise, it is intended that the conscious application thereof will be short-lived. A child may use a chair as a support when it is learning to walk, but he is not supposed to go through life clinging to a chair.

The abdominal muscles will soon become abominable muscles if you are obliged always to be conscious of their action. The skilful organist understands every key and every stop of the instrument upon which he plays; but he, like all others, must have his share of the necessary drudgery in the learning, ere he reaches perfection.

There may have been a time when his fingers were all thumbs; but through steady, patient toil in the mechanism of his work, his fingers glide so gently over the keys, touching here and there as if by chance, yet producing such harmony that it reminds us of the bird on the wing, in its rhythmical movement above the water, dipping now and then to get a response from the very touch of the tip of the wing,— now light and delicate, again with a splash; yet there is harmonious action in every move and touch.

Be not discouraged. Do a little each day, but do that little well. Because you are born with vocal organs you cannot expect to procure the best results without much labor and practice. The eaglet, in the nest, would not know the value of its wings were it not for the mother-bird, who "must be cruel only to be kind." She crowds it out of the nest far up the cliff, to teach it to fly; and spreading her wings, she drops underneath, and catches it. Again and again she removes its support, but as often repeats the catching, and finally she takes it back to its nest. It has had its first lesson, but even that lesson will do it no good if it *remains* in the nest. So must you, my pupil, begin at the *ABC* of all you undertake, and learn to strike out for yourself, if you wish to become a master. Then there will come a time when the results will be produced without conscious effort. You may have high *aspirations*, but you must begin with low *preparations*.

"Heaven is not reached by a single bound.  
We build the ladder by which we rise  
From the lowly earth to the vaulted skies,  
And we mount to its summit, round by round."

Be patient, persevering, and hopeful, and your labor will not be in vain. Fifteen minutes of judicious practice daily is better than an hour at hap-hazard. It is the constant, steady dropping that wears away the stone.

These pages contain the gleanings of years of labor in the rich, ripe field of experience. If out of the harvest the reader secures the many measures of helpfulness herein contained, the writer will feel amply repaid for having placed his labor in a form to be utilized by many whom it may never be his pleasure to meet.











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